Online International Conference on *"Recent Trends in Computer Science and Information Technology"* (ICRCSIT-20)

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Departments of Computer Science and Engineering & Information Technology in association with CSI & Global Cyber Security forum presents

Online International Conference on "Recent Trends in Computer Science and Information Technology" on 17th & 18th June 2020 (ICRCSIT – 20)

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M. LAXMAN REDDY
CHAIRMAN

MESSAGE

I am extremely pleased to know that the departments of Computer Science and Engineering & Information Technology of SMEC is organizing Online International Conference on "**Recent Trends in Computer Science and Information Technology (ICRCSIT) - 20**" on 17th and 18th of June 2020. I understand that large number of researchers have submitted their research papers for presentation in the conference and also for publication. The response to this conference from all over India and Foreign countries is most encouraging. I am sure all the participants will be benefitted by their interaction with their fellow researchers and engineers which will help for their research work and subsequently to the society at large.

I wish the conference meets its objective and confident that it will be a grand success.

M. Laxman Reddy

M.LAXMAN REDDY
Chairman

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G. CHANDRA SEKHAR YADAV
EXECUTIVE DIRECTOR

MESSAGE

I am pleased to state that the departments of Computer Science and Engineering & Information Technology of SMEC is organizing a prestigious Online International Conference on "**Recent Trends in Computer Science and Information Technology (ICRCSIT) - 20**" on 17th and 18th of June 2020. For strengthening the "MAKE IN INDIA" concept many innovations need to be translated into workable product. Concept to commissioning is a long route. The academicians can play a major role in bringing out new products through innovations.

I am delighted to know that there are large number of researchers have submitted the papers on Computer Science and Information Technologies. I wish all the best to the participants of the conference additional insight to their subjects of interest.

I wish the organizers of the conference to have great success.

G. CHANDRA SEKHAR YADAV
Executive Director

St. MARTIN'S ENGINEERING COLLEGE

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DR.P. SANTOSH KUMAR PATRA
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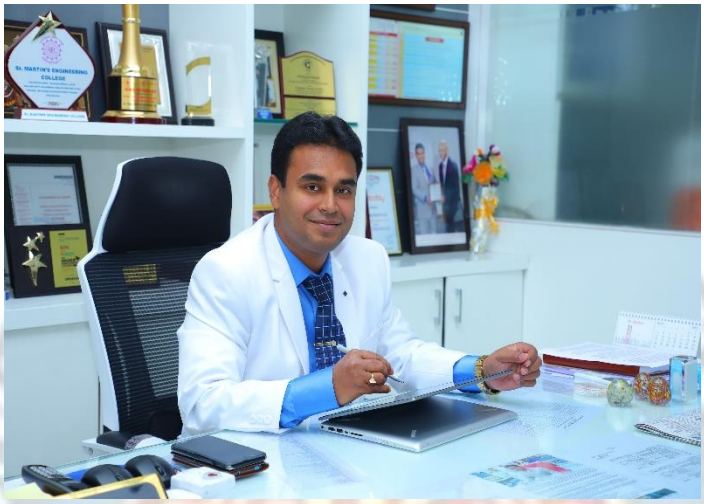

I am delighted to be the Patron for the **first Online International Conference** on " Recent Trends in Computer Science and Information Technology (ICRCSIT) - 20", organized by the departments of Computer Science and Engineering & Information Technology, in association with Computer Society of India and Global Security Forum, on 17th and 18th of June 2020. I have strong desire that the conference to unfold new domains of research among the Computer Science and Engineering & Information Technology fraternity and will boost the knowledge level of many participating budding scholars throughout the world by opening a plethora of future developments in the field of Computer Science and Information Technologies.

The Conference aims to bring different ideologies under one roof and provide opportunities to exchange ideas, to establish research relations and to find many more global partners for future collaboration. About 497 research papers have been submitted to this conference, this itself is a great achievement and I wish the conference a grand success.

I appreciate the faculties, coordinators and department Heads of Computer Science and Engineering & Information Technology for their continuous untiring contribution in making the conference a reality.

(Dr.P. Santosh Kumar Patra)
Principal

CONVENERS

The world is always poised to move towards new and progressive engineering solutions that results in cleaner, safer and sustainable products for the use of mankind. India too is emerging as a big production center for world class quality. Computer Science and Engineering & Information Technology play a vital role in this endeavor.

The aim of the Online International Conference on **"Recent Trends in Computer Science and Information Technology (ICRCSIT) - 20"** being conducted by the departments of Computer Science and Engineering & Information Technology of SMEC, is to create a platform for academicians and researchers to exchange their innovative ideas and interact with researchers of the same field of interest. This will enable to accelerate the work to progress faster to achieve the individuals end goals, which will ultimately benefit the larger society of India.

We, the organizers of the conference are glad to note that 497 papers have been received for presentation during the online conference. After scrutiny by specialist 302 papers have been selected, and the authors have been informed to be there at the online platform for presentations. Steps have been to publish these papers with ISBN number in the Conference Proceedings and all the selected papers will be published in Scopus / UGC recognized reputed journals.

The editorial Committee and the organizers express their sincere to all authors who have shown interest and contributed their knowledge in the form of technical papers. We are delighted and happy to state that the conference is moving towards a grand success with the untiring effort of the faculties of Computer Science and Engineering & Information Technology of SMEC and with the blessing of the Principal and Management of SMEC.

Dr. P. Udayakumar & Dr. SV Achuta Rao

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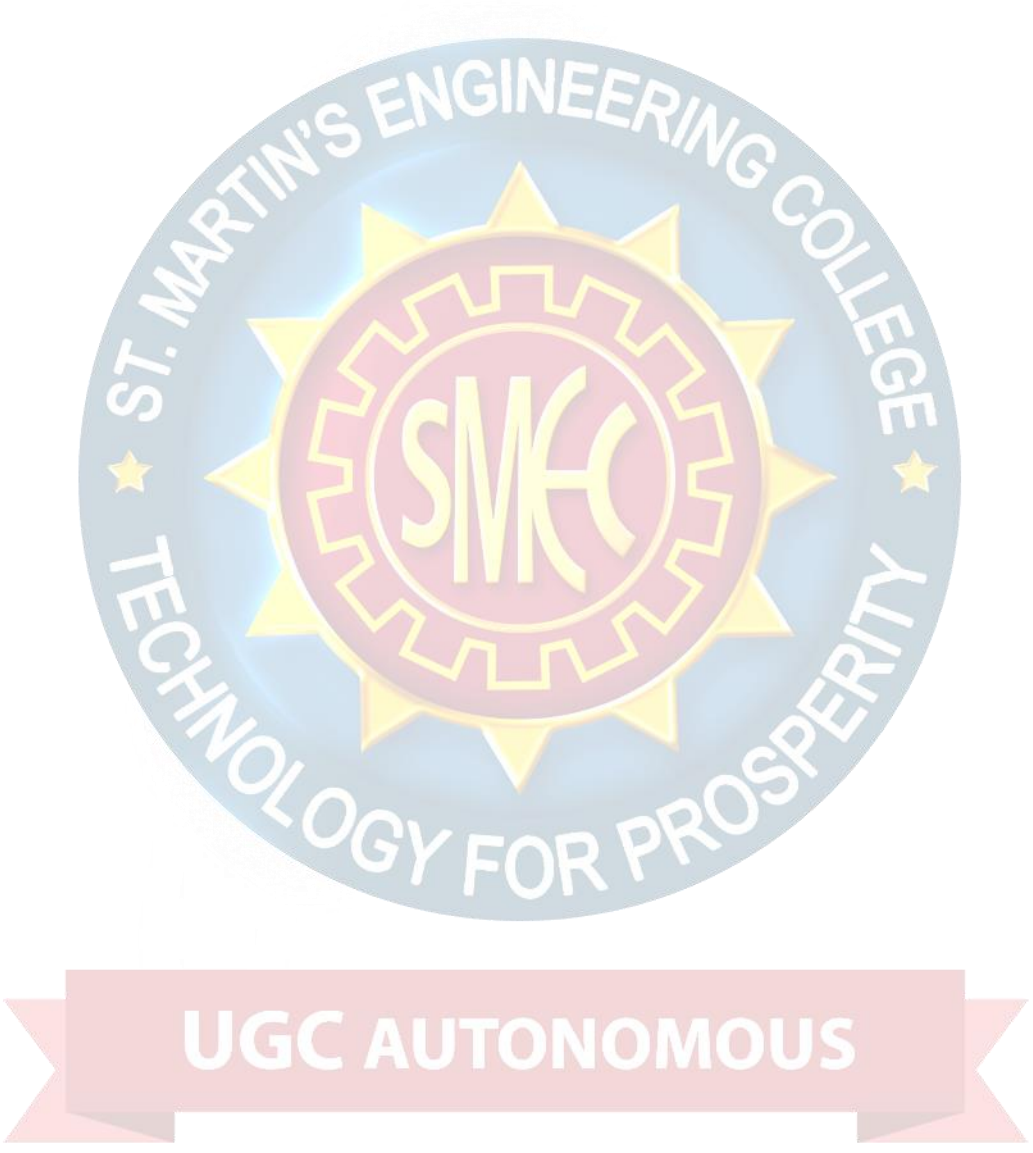

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PAPER ID: ICRCSIT-0001

Classification of Collaborative Learning Data using K-Means and Decision Tree

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Abstract

Collaborative learning has become essential for teaching, learning patterns and procedures with the express growth of E-Learning. Vigorous research in the course of time revealed that the involvement of students in the classroom discussions is severe and also collaborative in acquiring the knowledge. Collaborative learning is a method where a group of students working together to achieve a goal. TRAC is one of the online collaborative learning tool used by student teams. It is open access, professional software development tracking system. It supports collaboration by integrating three tools: Group wiki, Ticketing system, and Subversion control. Data is collected from the student's usage of TRAC tool by considering the wiki's events, wiki pages edited, ticketing events and subversion commit, all traces of the student actions. This paper aims to cluster students based on their performance in group coordination. The students are grouped to differentiate the better groups from the inferior groups. In this paper, K-Means clustering which is an unsupervised learning algorithm is used to group the students and to improve the group performance. After clustering, consider the train set with class labels and the test set without labels to evaluate the performance of the decision tree. It is a tree-like diagram that represents the outcomes in the leaf nodes. The results show very clearly that the students belong to their respective groups.

Keywords: Data mining; Clustering; K-Means; Classification; Decision tree.

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Prediction of Defect-Prone Software Modules using Machine Learning, Artificial Intelligence & Neural Network Optimization Techniques

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Abstract

The software defects due to defective modules rather than the defect free ones are imbalanced in nature. In software quality, these attributes are referred to as software metrics; they are raw data of software domain. Evaluated various data mining, Machine Learning techniques, Artificial Intelligence and Neural Network Optimization techniques and their classifiers for software defect prone modules for better performance is identified and also a hybrid method to reduce computational cost and to improve the overall performance. An extensive literature review, comparison of Optimization techniques results has given as a summary, and also concluded with real time scope for future research directions.

Keywords: Defect-prone modules, quality, software metrics, Evolutionary, Classifiers, Algorithms.

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PAPER ID : ICRCSIT-0003

Layered Digital Forensics Investigation Model for Internet of Things (IoT) using Machine Learning

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Research Scholar, Deptt. Of CSE, UCoE, Punjabi University Patiala

Abstract

Internet of things is the area which is very useful in these days life, because it makes the life of people very easy by the use of sensors and other things. In addition of it, there are also security challenges for the users and developers. As we know crimes are increasing day by day in this world. Researchers are finding new tools and techniques to tackle with this. Digital forensics analysis is very popular in these days to investigate the crimes, but IoT forensics can be very helpful for the crime analysis because most of the devices used in these days are IoT based. In this paper, a layered digital forensic model is developed to analyze IoT devices. It will help to investigate crime scenes thoroughly because of its layered structure. It combines three approaches in it : cloud forensics, network forensics and device level forensics. In addition to this machine learning system is also used for preliminary analysis that will make the process fast and more efficient. We believe that this model will help to investigate IoT devices and produces the sound reports for the resolution of crimes.

Keywords: Digital forensics, Internet of things, IoT forensics, Digital investigation.

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PAPER ID : ICRCSIT-0009

A Review Paper on DES, AES, RSA Encryption Standards

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Abstract

Cryptography is wide domain with many subs. The objective of this review paper is to give light review for readers and students of the three commonly used algorithm two in symmetric cryptography DES, AES and one in asymmetric cryptography RSA. Allowing the reader to have simple understanding of the background history of the algorithm in review and the key functional cipher operation of the algorithm. Accordingly, summary of strength and weakness of each algorithm under the review will be highlighted. And how the security goals is such confidentiality and integrity are achieve using the mentioned algorithms. The paper will sequentially list and review the said algorithms and clarify the relational between them. Such as the relation between the symmetric and asymmetric algorithm the one with secret key and the ones with key pairs. The paper may insight some of the research window for upcoming scholar research in the field of cryptography.

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PAPER ID: ICRCSIT-0010

Amalgamation of Artificial Intelligence & Wireless Sensor Networks to Develop Chatbot for COVID-19 Pandemic

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Abstract

Spreading of COVID-19 is making it very hard for healthcare departments and governments to solve people queries; due to limited front-desk assistance. This problem can be solved by cutting-edge technology like Artificial Intelligence. The purpose of this study is to implement AI-powered chatbot, which is very helpful to give necessary information about the disease to the user in a conversational way. With the help of NLP technology, Cloud and message application, we can build chatbots very easily. We can easily define the flow of the conversation in an AI-service, which have an excellent capability of Natural Language Technology. We have built a chatbot which can give common question-answer to the user and on the top of it also able to predict the sign and severity of COVID-19 based on user's symptoms. As users interact with the bot, we can make our NLP model more accurate, by training it further, to understand users' questions meaning.

Keywords: COVID-19, Healthcare, Cloud computing, Artificial Intelligence, Natural language processing, Chatbot

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PAPER ID: ICRCSIT-0013

Internet of Things based Image Processing using Open cv-Python and its Application in smart Building

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Abstract

The nation's buildings and dwelling places where people spend about more than ninety percent of their valuable times are destined to be smarter. A smart building adopts automated control systems that automatically control the different operations like air conditioning, lighting, ventilation, security and other systems. Commercial buildings extensively use electricity to power lighting, heating/cooling systems and are manually operated. Most of the times energy spent on lights, fan, air conditioner go as waste. Thus energy saving is most important for developing an integrated system that makes buildings to be operated more intelligently and help reaping the benefits in terms cost savings on electricity billing. Internet of Things based image processing using OpenCV-python and its application in smart building can be used to conserve energy. As the project is envisaged to be for a specific application of image processing to identify presence of human being through supervised machine learning algorithm, it is proposed to use OpenCV (Open source computer vision) library for image processing. The objective is to identify presence of human being and then use it in IOT control application. Once the presence of human beings is detected, temperature is needed to be monitored; if it's very cold then air-conditioner need not be switched on. This temperature setting can be made programmable. Ambient light needs to be measured based on which lighting system to be switched ON/ OFF. The data is then sent to cloud. Through cloud, it is possible to control the appliances manually through phone. Cloud makes it possible to monitor the appliances remotely. As importance is given these days for energy conservation and also as it involve huge recurring cost, this project envisages to prototype a solution to operate these devices only if needed, which would then not only save energy but also the recurring cost.

Keywords: Internet of Things, Open CV-python, smart building, Image processing

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PAPER ID: ICRCSIT-0014

SWAPS - Model for Smart Farming

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Abstract

In the era of technology everyone is trying to work with the help of machines, because machines may reduce the cost of working and also work with efficiency as compared to humans. So, researchers are trying from a decade to make the farming profession upgrade by using smart farming techniques. In this paper, we are proposing a SWAPS model for smart farming. This is a layered model used for smart farming, and it will cover the five factors and then output of these factors will be analyzed to produce commands for the automated devices to work with the crops. This model will help the farmers to work with the large farms using automated IOT and unmanned vehicles, and it will also provide the high production.

***Keywords**:* Smart farming, IoT, UAV, UGV, smart agriculture.

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PAPER ID: ICRCSIT-0018

Novel Approach for Enhanced Teaching Learning Process

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Abstract

Now a days there are a lot of learning management system for e-learning. But most of the proposals have limited amount of resources and are inflexible in the stakeholder's (students and staff) self-management of learning artefacts. The proposed methodology describe a system in which the learning scenarios are not limited and as well as the faculty have main control over the stakeholders. Many alternative approaches such as profile primarily based Page Rank (PPR) ,AMD GPUs distributed Matrix-Vector Multiplication (SpMV)are described earlier for computing Page rank. The proposed system ranks a page considering multiple factors such as relevance and user feedback. These two crucial factors are considered for ranking an internet page rather than considering other factors by existing methodologies. Implemented work refines the ability to control the management of learning artefacts. It also improves the performance of the learning management system.

***Keywords**:* Web page classification, Rank Aggregation, Web crawler, Ubiquitous Learning Environments, Virtual Learning Environments, Web Content Mining

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PAPER ID: ICRCSIT-0021

Real Time Machine Learning Detection of Heart Disease

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Abstract

According to recent survey by UN agency (World health organization) 17.9 million individuals die annually owing to heart connected diseases and it's increasing day-by-day. With the increasing population and illness, it's become a challenge to diagnose illness and providing the suitable treatment at the proper time. However, there's a light-weight of hope that recent advances in technology have accelerated the general public health sector by developing advanced useful medical specialty solutions. This paper aims at analysing the assorted datamining techniques particularly Naive Thomas Bayes, Random Forest Classification, Decision tree, Support Vector Machine and logistic Regression by employing a qualified dataset for Heart disease prediction that is include varied attributes like gender, age, blood pressure level, blood glucose etc. The analysis includes finding the correlations between the assorted attributes of the dataset by utilizing the quality data processing techniques and thus treating the attributes befittingly to predict the possibilities of a Heart disease. These machine learning techniques take less time for the prediction of the illness with a lot of accuracy which can know priorly about heart disease and can take related treatment.

Keywords: Classification, Data Processing and logistic regression.

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PAPER ID: ICRCSIT-0022

Comprehensive Comparative Analysis: Disease Prediction using Machine Learning Techniques

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Abstract

Medical databases accumulate huge amount of data about the patient diseases and their clinical histories. Data mining techniques are applied to the huge amount of complex data to extract the useful knowledge from those data for making efficient decision making. Machine learning concepts offer a great support to medical research field. More research is going on to perform accurate disease classification and prediction based on previous medical history. Individual classifiers, classifier with feature selection method for optimal feature set and ensemble group of classifiers are effectively used for the classification. In this paper we are considering four UCI standard repository datasets that is heart disease dataset, pima dataset, spectf dataset, thoracic surgery datasets and collected the various literature work done on those datasets. Literature work is classified based on individual classifiers, hybrid and ensemble methods. The classification performance of hybrid and ensemble methods is better when compared to the individual classifiers. The main contribution of this paper to show the comparative performance analysis of ten machine learning classifiers with eight feature selection methods are measured using tenfold cross validation and the experimental results shows the comparative analysis of different classifiers.

Keywords: Data mining, Machine Learning, Classification, Feature selection

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PAPER ID: ICRCSIT-0023

Multilingual Information Retrieval: Perceptions and Practices

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Abstract

Multilingual Information Retrieval (MLIR) manages posing queries in at least one dialect and recovering documents in at least one distinct dialect. Users of certain dialects experience the ill effects of constrained access to web in formation assets in light of the fact that their local dialects are not spoken to on the web. While looking through the web utilizing apitifully showed up language, the list items are not many and less important. The Information Retrieval framework's goal are to give pertinent data to the user's question. In any case, now and again, this pertinent data might be not accessible in the user's local language. For instance, while looking for "programming designing" as a french question, the outcomes mightbe not many or potentially not significantly contrasted and the outcomes got from looking through a similar inquiry in English. In this way, getting the applicable data whatever the user's language is the principal objective of Multilingual Information Retrieval(MLIR). For instance for certain circumstances that require MLIR frameworks, a client tries to discover all the applicable data accessible, whatever the language, for example, patent legal advisors search for patent data, business examiners need to gather outside business data from various nations, column is need to look for news in different nations, and clients scan for records which contain a blend of a few dialects. With an inexorably globalized economy, the capacity to discover data in different dialects is turning into a need.

Keywords: Multilingual Information Retrieval, Information Retrieval, programming designing.

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PAPER ID: ICRCSIT-0024

Depressive Disorder Prediction using EEG Signal

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Abstract

Depression is the most commonly mental ailments that at its most horrible and lead, to suicide. Diagnosing depression in the initial curable stage is very crucial. It may also lead to various disorders like sleep disorders and alcoholism here in this paper the Electroencephalogram Gram (EEG) signals are got from publicly available database that are processed in MATLAB. This can be useful in categorizing subjects with the disorders using classifier tools present in it. For this aim, the features are extracted from frequency bands i,e (alpha, delta and theta, beta).

Keywords: Electroencephalographic (EEG); Fast Fourier Transform (FFT), EDF (European Data Format), and Wavelet Packet Transform, (WPT)

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Efficient Methodology for Information Leakage System in Multi Cloud Services

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Abstract

Many schemes have been recently advanced for storing data on multiple clouds. Distributing data over different cloud storage providers (CSPs) automatically provides users with a certain degree of information leakage control, for no single point of attack can leak all the information. However, unplanned distribution of data chunks can lead to high information disclosure even while using multiple clouds. In this work, we study an important information leakage problem caused by unplanned data distribution in multicloud storage services. Then, we present StoreSim, an information leakage aware storage system in multicloud. StoreSim aims to store syntactically similar data on the same cloud, thus minimizing the user's information leakage across multiple clouds. We design an approximate algorithm efficiently generate similarity-preserving signatures for data chunks based on MinHash and Bloom filter, and also design a function to compute the information leakage based on these signatures. Next, we present an effective storage plan generation algorithm based on clustering for distributing data chunks with minimal information leakage across multiple clouds.

Keywords: storesim, cloud computing,csp, github, information leakage,multi data storage,meta server.

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Block Chain-Enabled IoT based Smart Home Community Authentication System

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Abstract

Decentralized security and privacy system based in block chain provide an enormous lift to the infrastructure of the Internet of Things (IoT). In a smart home, Block Chain (BC) technology serves as the perfect gatekeeper for all communication packages. It uses the system's ability to prevent primary safety triads, like confidentiality, integrity, and availability. BC's new instantiation by eliminating the POW concept is based on its hierarchical system and distributed trust in order to respect IoT security and privacy standards. These objects are often used in open circumstances to provide advanced services in various request areas, including smart cities, health-care, and societies. These IoT devices generate a great deal of information that is susceptible to confidentiality and safety. The prevention of these devices is, therefore, significant to ensure system safety and reliability. The new model adds more role or trust-based group identities to the traditional novel instantiation. This work presented and applies to several scenarios a decentralized validation and access control system for lightweight IoT devices. This method is based on fog computing knowledge and the BC concept. In comparison to the state-of-the-art authentication technology based on BC, the results of the experiment perform significantly better. And other trusted communities or local protection authorities can closely monitor and assist the home concerned in a situation of total power outage or collapse.

Keywords: Smart Home, Block chain, Internet of Things, Drone, Gated Community.

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Trust-Ticket based Multifactor Node Authentication and Data Securing Protocol Scheme for WSN

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Abstract

Authentication of sensor nodes and secure routing of data has remained an open challenge in wireless networks in different vulnerable areas over the last decade. When WSN composed of small and cheap nodes is considered, these problems become more significant. A new efficient multi-factor authentication protocol based on trust tickets is developed on WSNs for IoT applications based on an improved ECC method. Besides, a verification algorithm was developed to perform receiver user checks, making both computation overhead and latency effective. Through a security investigation, we are showing the consistency of the protocol besides many recognized attacks. Also, we conduct a comprehensive evaluation of our protocol utilizing network size simulations in which we focused test scenarios based on the trusted authority number. The results of the simulation demonstrate the energy consumption benefits of our protocol. And ensure maximum possible QoS levels through higher PDR and minimum jitter rates.

Keywords: Security, ECC, WSN, Trust-Ticket, Trusted Key, Multi-Factor Authentication

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Webcam Motion Detection Using IoT

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Abstract

In the fast-growing world everybody is concerned with security. To reduce such security concerns in our home atmosphere we can use webcam motion detector. The basic purpose of this webcam motion detection using IOT is to know the unauthorised person's identity. When a person passes Infront of the motion detector then, motion detector gets active and make webcam to capture the images. These captured images are sent to the devices connected on the IP network and it also rings a siren, if you need it to be rung. This is where IOT plays a vital role. This surveillance makes your home a better secured place even in human absence. This can also be used to monitor in restricted areas. This whole thing is done using IOT and wireless networks.

Keywords: IOT, Detector, Web Camera, Surveillance and Wireless Networks

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PAPER ID: ICRCSIT-0029

Predictive Maintenance for Fault Detection in Industry 4.0

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Abstract

The area of predictive maintenance has taken a lot of prominence in the last couple of years due to various reasons. With new algorithms and methodologies growing across different learning methods, it has remained a challenge for industries to adopt which method is fit, robust, and provide the most accurate detection. Fault detection is one of the critical components of predictive maintenance; it is very much needed for industries to detect faults early and accurately. Predicting the life condition of a component is so crucial for industries that have the intent to grow in a fast-paced technological environment. Recent studies on predictive maintenance help industries to create an alert before the components are corrupted. Prediction of component failures, companies have a chance to sustain their operations efficiently while reducing their maintenance cost by repairing components in advance. To predict and be ahead of all these scenarios we imply Artificial Intelligence (AI) and Deep Learning using long short- term memory (LSTM) neural networks to predict when an aircraft engine might require to be serviced or replaced. In this paper Long Short-Term Memory (LSTM) networks have been performed to predict the current situation of an engine. The LSTM model deals with sequential input data. The training process of LSTM networks has been performed on large-scale data processing engine with high performance. For these predictions we require a dataset of previous aircraft historical data having 21 sensor values of each aircraft. Aircrafts have three different settings = set1, set2, set3 so that we can manipulate the data and find out the relation/trend in the data so that our system gets capable of predicting remaining useful life (RUL) of an aircraft engine.

Keywords: Predictive maintenance, industry 4.0, fault detection, Deep Learning, Artificial Neural Networks, LSTM, Sensor value, remaining useful life.

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Alumni Management System

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Abstract

Alumni management is one of the thrust areas considered focal to institutional development mostly in developing countries. A strong alumni system plays an important role in reaping anonymous benefits for student-student networks as well as institution-student networks. A major problem with some of the existing systems is the details of any student is exposed to anyone on the web. There is no Alumni Management System for most of the colleges in "Telangana State" (Tier - 3). Our system proposes an easy and interactive management portal for creating networks among students as well as institutes. The portal allows currently enrolled students as well to create networks with graduates of the organization. The system validates the students enrolled to the organization based on their Registration Number collected from the Institute/Organization.Our system makes it easier for users to register into the system, connect with the alumni of organization, easy creation of events like postings on jobs, events happening around the city etc. The users will be notified about the new events and the users can register for a particular event from their feed.

Keywords: Alumni management, University alumni, JSON, Android SDK, Android Virtual Device, Web View.

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Privacy Preserving Cloud Storage Scheme in Fog Computing using Computational Intelligence

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Abstract

Recent years witness the development of cloud com-puting technology. With the explosive growth of unstructured data, cloud storage technology gets more attention and better develop-ment. However, in current storage schema, user's data is totally stored in cloud servers. In other words, users lose their right of control on data and face privacy leakage risk. Traditional privacy protection schemes are usually based on encryption technology, but these kinds of methods cannot effectively resist attack from the inside of cloud server. In order to solve this problem, we propose a three-layer storage framework based on fog computing. The pro-posed framework can both take full advantage of cloud storage and protect the privacy of data. Besides, Hash-Solomon code algorithm is designed to divide data into different parts. Then, we can put a small part of data in local machine and fog server in order to pro-tect the privacy. Moreover, based on computational intelligence, this algorithm can compute the distribution proportion stored in cloud, fog, and local machine, respectively. Through the theoretical safety analysis and experimental evaluation, the feasibility of our scheme has been validated, which is really a powerful supplement to existing cloud storage scheme.

Keywords: Cloud computing, cloud storage, fog computing, privacy protection.

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Phishing Website Detection using Machine Learning

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Abstract

In today's world, the internet has brought a tremendous change in ecommerce aspect of people's lives. However, it is prone to the wide variety of security attacks. One of the most vulnerable security threat which poses a problem to the internet users is phishing. Phishing is an attack made to steal the sensitive information of the users such as password, PIN, Social Security Number (SSN) etc., In a phishing attack, the attacker creates a fake website to make the users click it and steal the sensitive information of users. There are many ways to detect the phishing websites or phishing urls. Phishing websites contain multiple cues both in their content part as well as in browser-based security indicators. There are many solutions proposed by several researchers in which no single approach evolves as an effective method to detect phishing attacks. This paper focuses on the extracting the features which are then classified based on their effect within a website. The feature groups include address-bar related features, abnormal- based features, HTML – JavaScript based features and domain based features. For each url, identify the features from each group and if applicable, the Random Forest Classification Algorithm applied to categorize whether a URL is phishy, or legitimate.

Keywords: Phishing Detection, Phishing Website, Feature Extraction, Phishing Website, Phishing Attacks.

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Wine Quality Detection

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Abstract

Wine is an alcoholic drink made from fermented grapes. Yeast consumes the sugar in the grapes and converts it to ethanol, carbon dioxide, and heat. Different varieties of grapes and strains of yeasts produce different styles of wine. These variations result from the complex interactions between the biochemical development of the grape, the reactions involved in fermentation and the production process. Many countries enact legal appellations intended to define styles and qualities of wine.

Wine quality strongly depends on the grape quality. To obtain high-quality wines, it is necessary to process healthy grapes at the correct ripeness stage and for this reason the farmer hasto be especially careful in the prevention of parasite attacks on the grapevine. It is the result of a complex set of interactions, which include geological and soil variables, climate, and many variables, climate, and many viticulture decisions. Taken as a whole, they may be described as the terroir effect. While grape quality and climate plays a significant role, postharvest winemaking techniques such as maceration, fermentation, extraction, and aging also influence wine flavours immensely.

Keywords: wine, flavours, alcohol, fermentation, grapes, styles, country.

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Multi Class Image Classification System using Deep CNN Architecture

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Abstract

In recent years, with the speedy development in the identification of digital content, automatic classification of the images became the most challenging task in the fields of computer vision. Automatic understanding and analysis of images by the system are difficult as compared to human visions. Research has been done to overcome a problem in the existing classification system, but the output was narrowed only to low-level image primitives. However, those approaches lack an accurate classification of images. our system uses a deep learning algorithm to achieve the expected results in the area like computer visions. Our system presents a Convolutional Neural Network (CNN), a machine learning algorithm being used for automatic classification of the images. Our system uses the Caltech-UCSD Birds 200 dataset as a benchmark for the classification of multi-class bird images. The images in the dataset used for training which require more computational power for classification of images. By training the images using the CNN network we obtain the 90 percent accuracy result in the experimental part it shows that our model achieves high accuracy in classification.

Keywords: CNN, Classification, ANN, Deep Learning, Accuracy, Caltech-UCSD Bird 200

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Stock Market Prediction

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Abstract

The process of forecasting the stock prices has been a difficult task for many of the researchers, analysts and new investors. In fact, investors are highly interested in the research area of stock price prediction. For good and successful investment, many investors are keen in knowing the future situation of the stock market. Good and effective prediction systems for the stock market help traders, investors, and analysts by providing supportive information like the future direction of the stock market. Predicting stock market price is a complex task that traditionally involves extensive human-computer interaction. There are multiple prediction methodologies for share price forecasting. Time Series Fore casting is basic for share price forecasting and other financial model forecasts. As share prices are more nonlinear, more intelligent time series prediction systems are required. Existing systems accuracy are not efficient enough in predicting. In this paper, we propose to use LSTM Machine Learning Algorithm for efficient forecasting of stock price. This will provide more accurate results when compared to existing stock price prediction algorithms.

Keywords: RNN , LSTM, Stock price analysis , Future prediction**.**

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Securing Data using DES, RSA and LSB Steganography

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Abstract

Data Security is the main concern in different type of applications from Data storing in clouds to sending messages using chat. In order to provide security for data in cloud there many types of techniques which are already proposed like AES, DES and RSA but in existing method most of the time only single type of encryption was used either AES or DES, or RSA based on us requirement but in this system main problem is each encryption is done using encryption keys if these keys are exposed in any case entire methods are used but three methods will be used. When user uploads data will split into three parts. First part will be encrypted using AES, second part will be encrypted using DES, third part will be encrypted using RSA and these three encrypted files will be stored in cloud and keys used for AES, DES and RSA are stored in image using LSB. When use want to download total data from cloud first keys are used for decrypting data again by using AES ,DES and RSA and final data is combined and stored in file. This method provides more security for data.

Keywords: Cloud Security, Cloud Computing, Hybrid Encryption, AES, DES, RSA, Steganography and LSB.

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Identification and Classification of Drone using KNN

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Abstract

Flying drones in safety zones is strictly prohibited. However anti-social elements are likely to hit important targets in such zones, by using drones. The aim of this project is to continuously monitor safety zones using SAR images and raise an alarm as soon as a Drone is detected. This project contains three modules: DII (Drone Image Input) module is used to provide different drone images as input for the system. The DI (Drone Identification) module is used to monitor the images of the safety zone and to identify drones when they enter the safety zone. The 'alarm' module is used to send the message to the safety officers as soon a Drone is detected in the safety zone. This project uses the OpenCV algorithm to identify different types of drones and distance calculation algorithm to measure the distance of the Drone from the safety zone. The images of various types of drones are stored in an image file system. The file system will be stored at a specific location in directory structure. The location will be fed as input to the system. KNN classification is used to classify the drone as one of the drone types. The k-nearest neighbour's algorithm (k-NN) is a non-parametric method used for classification. The input consists of the k closest training examples in the feature space. The output is a class membership. An object is classified by the class that is most common among its k nearest neighbours. The classification is based on the length, width, height and curvature of the drones.

Keywords: KNN, Drones, Zone, Classification, Identification and Drone image input.

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Rumour Detection using Machine Learning Algorithms

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Abstract

In our modern era where the internet is ubiquitous, everyone relies on various online resources for news. Along with the increase in use of social media platforms like Facebook, Twitter etc. news spread rapidly among millions of users within a very short span of time. The spread of rumour has far reaching consequences like creation of biased opinions to swaying election outcomes for the benefit of certain candidates. Moreover, spammers use appealing news headlines to generate revenue using advertisements via click-baits. In this project, we aim to perform a binary classification of various news articles available online with the help of concepts pertaining to Natural Language Processing and Machine Learning.

Keywords: Rumour, Real, NLP, Classification, Machine learning

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Feature Selection Methods for Prediction of the Individual's Status of HIV/AIDS From EDHS Dataset - A Filter Approach

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Abstract

Lately, data is widely available in information systems and researchers have devoted much attention to data mining in transforming such data into useful knowledge. It implies the presence of low-quality, inaccurate, repeated and noisy data which has a negative effect on the method and meaningful pattern of observing knowledge. Selection of features is the mechanism that recognizes the most appropriate attributes and elimination of the redundant and insignificant attributes. In this research, a feature selection approach was conducted using filter-based feature selection methods to predict the individual status/test outcome of the Ethiopian Demographic and Health Survey (EDHS-HIV/AIDS) dataset for HIV / AIDS. The study uses three widely employed filter-based feature selection methods to validate the efficacy of the proposed feature selection methods namely: univariate, feature importance and correlation coefficient. We used seven classification algorithms to test the performance of selected features, and each classifier output is evaluated using accuracy, precision, recall, f1-score and ROC. Among the algorithms, the classifiers namely Random Forest, K-Nearest neighbours and Gradient Boosting classifiers achieve higher accuracy levels on the EDHS-HIV/AIDS dataset than others after applying the filter-based feature selection methods. In our research, we have proved that the importance of the specified feature selection methods is improving the performance of learning algorithms.

Keywords: Feature Selection, Filter Methods, EDHS, HIV/AIDS Status.

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ParkCrowd: Reliable Crowdsensing for Aggregation and Dissemination of Parking Space Information

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Abstract

The scarcity of parking spaces in cities leads to a high demand for timely information about their availability. In this paper, we propose a crowd sensed parking system, namely Park Crowd, to aggregate on-street and roadside parking space information reliably, and to disseminate this information to drivers in a timely manner. Our system not only collects and disseminates basic information, such as parking hours and price, but also provides drivers with information on the real time and future availability of parking spaces based on aggregated crowd knowledge. To improve the reliability of the information being disseminated, we dynamically evaluate the knowledge of crowd workers based on the veracity of their answers to a series of location-dependent point of interest control questions. We propose a logistic regression-based method to evaluate the reliability of crowd knowledge for real-time parking space information. In addition, a joint probabilistic estimator is employed to infer the future availability of parking spaces based on crowdsensed knowledge. Moreover, to incentivise wider participation of crowd workers, a reliability-based incentivisation method is proposed to reward workers according to their reliability and expertise levels.

Keywords: Existing System, Proposed System, Modules Description, Registration.

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Malware Development for Security Assessment

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Abstract

Malware testing is the practice of subjecting malicious programs to software testing tools and antivirus programs designed for legitimate applications. Attackers can get past antivirus and other detection methods by hiding malware inside media files. Malware is a catch-all term for any type of malicious software, regardless of how it works, its intent, or how it's distributed. A virus is a specific type of malware that can replicate itself by inserting its code into other programs. Computer Malware has been prominent since the start of the commercial internet. Viruses spread by attaching themselves to legitimate files and programs. Victim allows a virus by executing the infected application or file. Once executed, a virus may infect or encrypt files and folders, corrupt applications, or disable system functioning. The terms "virus" and "malware" are often used interchangeably. However, they are technically different. A Trojan Horse or Trojan is a type of malware that is often interpreted as legitimate software. Computer users are usually tricked by some form of social engineering into loading and executing malware on their systems. Once activated, Trojans can enable cyber criminals to spy on you, steal your sensitive data, and gain access to your system. A backdoor Trojan provides malicious users control over the infected computer remotely. They enable the victim to do anything they wish on the compromised computer including sending, receiving, executing and deleting files, and rebooting the system. The purpose of this project is to make security assessments of systems by building malware and subjecting it to the system tools and anti-malware programs and also to make the system resistant to advanced and dangerous viruses that could result in a huge data breach.

Keywords: Malware Development, Security Assessment, Testing, Target, Attacker, Antivirus, Trojan.

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Analysis of Cryptography Algorithms for Data Security and Authentication in Internet of Things

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Abstract

IoT – Internet of Things is a vast area in the field of computer science domain. The Internet of Things (IoT) is a new set of inflectional that combines technologies coming from different approaches. IoT applications such as smart watch, smart phone, smart home, smart vehicles, and smart offices which makes day today activities is easier and secured. It is inevitability to produce better security for smart device and sensor devices along with authentication. The built-in security nature can easily track user's identity with data security, privacy, and authentication concerns. Fastidious issues in today's IoT applications are stealing the information and disruption of operations. Due to lack of environment in IoT, strong and secured algorithms are required to ensure the data security and authentication of the user. This paper mainly covers optimized and advanced cryptographic algorithms with less computational cost in terms of power consumption and memory which provide better security in the Internet of Things (IoT).

Keywords: Internet of Things; Cryptography Algorithm, Data Security, Information Security, Privacy, Twofish Encryption Algorithm, Authentication.

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Analyzing and Detecting Money-Laundering Accounts in Online Social Networks

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Abstract

Virtual currency in online social networks (OSN) plays an increasingly important role in supporting various financial activities such as currency exchange, online shopping, and paid games. Users usually purchase virtual currency using real currency. This fact motivates attackers to instrument an army of accounts to collect virtual currency unethically or illegally with no or very low cost and then launder the collected virtual money for massive profit. Such attacks not only introduce significant financial loss of victim users, but also harm the viability of the ecosystem. It is therefore of central importance to detect malicious OSN accounts that engage in laundering virtual currency. To this end, we extensively study the behaviors of both malicious and benign accounts based on operation data collected from Tencent QQ, one of the largest OSNs in the world. Then, we devise multi-faceted features that characterize accounts from three aspects including account viability, transaction sequences, and spatial correlation among accounts. Finally, we propose a detection method by integrating these features using a statistical classifier, which can achieve a high detection rate of 94.2% at a very low false positive rate of 0.97%.

Keywords: Virtual currency, OSN, Laundering and correlation.

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CT Images Screen for Diseases using Deep Learning Algorithm

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Abstract

The occurrence of Severe Acute metabolism Syndrome Coronavirus two (SARS-COV-2) has caused some 1,00,000 cases of Corona Virus illness (COVID-19) in Asian country thus far, thereupon range continued to grow. to manage the unfold of the illness, screening massive numbers of suspected cases for applicable quarantine and treatment measures could be a priority. infective agent macromolecule testing supported specimens from the lower tract is that the diagnostic gold commonplace. However, the supply and quality of laboratory testing within the infected region presents a challenge, so different diagnostic ways area unit desperately required to combat the illness. supported COVID-19 radio graphical changes in CT pictures, we have a tendency to hypothesized that Artificial Intelligence's deep learning ways can be ready to extract COVID-19's specific graphical options and supply a clinical diagnosing prior the unhealthful take a look at, therefore saving crucial time for illness management

Keywords: Corona Virus, Macromolecule, Deep Learning and Illness management

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Smart Surveillance System

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Abstract

Now-a-days two wheelers are the most preferred mode of transport. It is highly desirable for bike riders to use a helmet. This paper presents an image processing technique by which motorcyclists without helmets can be detected. This moving vehicle can be detected by thresholding and then classified into motorcyclists and non-motorcyclists by area and aspect ratio. If a motorcyclist is detected without a helmet, the number plate of the motorcycle is read and noted. An algorithm is designed that will help to recognize number plates of bikers using images taken by camera. This project aims at prevention of accidents by automatically identifying the drivers wearing helmets or not. For this, MobileNetSSD for features extraction is used. Based on MobileNetSSD feature Extraction and OpenCV real time images captured by cameras are used. A database will be generated with the records to identify every offender accurately and imposing helmet violation fines, sending Challans to Emails and SMS of offender's mobile number. This system implements a pure machine learning in order to identify every type of helmet that it comes across with minimum computation cost.

Keywords: Helmet Detection, license number plate detection, Derivative edge detection Algorithm, Neural Network, (OCR) Optical Character Recognition.

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Cloud Computing for Mobile Users Accessing of Health Data with Secure Auditability

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Abstract

Spurred by the protection issues, checking the appropriation of electronic medicinal services frameworks and the wild achievement of cloud administration models, we propose to incorporate security with versatile social insurance frameworks with the assistance of the private cloud. Our framework offers notable elements including proficient key administration, security saving information stockpiling, and recovery, particularly for recovery at crises, and auditability for abusing wellbeing information. In particular, we propose to coordinate key management from pseudorandom amount producer for unlink ability, a safe indexing technique for security saving catchphrase look which conceals both hunt and access examples in view of repetition, and incorporate the idea of quality based encryption with limit marking for giving part based access control with auditability to counteract potential trouble making, in both typical and crisis cases.

Keywords: Auditability, Access, Cloud, Security, Framework.

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Intelligent System for Garbage Collection

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Abstract

Garbage monitoring is an essential issue for most of the cities in India. The current garbage monitoring and management system are highly ineffective contributing to high transportation and collection costs. Due to poor monitoring and collection, garbage bins are seen overflowing in certain areas which can lead to long-term problems such as bad odor and harmful diseases. On the contrary, in some places, garbage collection trucks end up collecting garbage from bins which have low garbage levels leading to high petrol consumption and increased air pollution. To overcome these problems "NodeMcu based smart garbage monitoring system" can be introduced as an effective solution. This smart garbage monitoring system employs NodeMcu as its main microcontroller. It uses the ultrasonic sensor as a level detector to detect the amount of garbage in the bin. It also employs an MQ-135 IR Sensor and a DHT sensor to monitor the quality of air surrounding bin and temperature and humidity data respectively. This information is then transmitted via the NodeMcu to Blynk application and ThingSpeak channel. In the Blynk application, the live monitored information is displayed using a graphical interface. In the ThingSpeak channel, the real-time output data is represented as a line graph that can be interpreted easily. Thus, this system provides a web platform as well as a mobile platform for efficient garbage monitoring.

Keywords: Smart garbage monitoring, Nodemcu, Ultrasonic Sensor.

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An Expert System for Solving Multi Objective Descision Making Problems: MPSO

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Abstract

Multi Particle Swarm Optimization **(**MPSO) is a modified form of Particle Swarm ptimization (PSO) which includes various sub-swarms instead of single swarm, thereby balancing the exploitation and exploration. The optimal solution termed as global best (gbest) is achieved by passing the best fitness value obtained from child swarm and further progression of gbest is achieved by parent swarm. Travelling Salesman Problem (TSP) is an NP hard problem aim is to find the minimum distance for a given cities by traversing exactly one's to reach the final destination. In this paper, MPSO techniques is used for solving multi-objective constraints problems using the proposed Boundary value Analysis (BVA) techniques. Analysis of the proposed techniques is done by comparing with the standard dataset taken from the TSP lib. The analysis is performed in terms of computation time, iteration, optimal value based on best case, worst case and average case, further more analysis is performed based convergence diversity and average convergence diversity. Form the analysis is it very clear that proposed techniques out perform well within a minimum computation time and minimum iteration, in case of particle 30. In future we plan to implement the proposed techniques in cloud computing environment for job scheduling problems.

Keywords: Multi Particle Swarm Optimization, Boundary value Analysis, Travelling Salesman Problem, and Particle Swarm Optimization.

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WIPE 2 CLEAN – A Virtualized Restroom Cleaning System

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Abstract

Intrusion detection procedure supervisors and analyses information to discover any invasion in the machine or community. Huge amounts of statistics are coming which has high volume and velocity which requires higher standards to handle attacks. When dealing with data in big data environments data can be supervised and unsupervised. Our approach overcomes this by providing machine learning techniques in big data environment. Some methods are PCA, SVM, etc. These techniques can work for single class of data and they can classify what is normal data and attack data.

Keywords: Random Forest, SVM, clustering

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Alteration of Train Derailments Using Image processing and IoT through the Aid of Global Positioning System

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Abstract

Technological advancements has partially contended to reduce the number of train accidents still remaining them as a major concern. To overcome this, the government has taken several precautions despite deadly catastrophes continuing to traumatize us and the safety of railway passengers being leading concern where India has lost to show progress. Thousands of people pass away due to lack of safety measures taken up by Indian Railways, which serves 13 million travelers every day. To overcome these train accidents and to save the life of human beings there is a need for mechanisms. In our work we are going to detect the problems on tracks or bridges in advance through satellite images to save the lives of human beings while they are on a train journey.

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PAPER ID: ICRCSIT-0056

Speaker Identification using Phonetic Distance Measurements

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Abstract

Pronunciation variability is one major factor based on which a speaker can be identified. In this paper, we present a new speaker identification model based on the pronunciation variability. The identification model uses vector quantization with phonetic distance as the distortion measure. Inter-pronunciation phonetic distances are measured using dynamic phone warping algorithm. The speaker models are prepared based on pronunciation variability and are built using the probability distribution function of the pronunciations which are mapped to the respective speakers. Speaker identification is based on Kullback-Leibler (KL) divergence among various speaker models. The data sets are taken from TIMIT, NTIMIT databases. The results have shown a significant improvement in identification performance measurements over the existing speaker identification models.

Keywords: machine learning, multi-layer code book, phonetic distance, dynamic phone warping, speaker identification.

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Performance Analysis of Optical Amplifier to Mitigate the Losses for DWDM System

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Abstract

We design a highly concentrated WDM (Wavelength division multiplexed) system, did its simulation in optisystem simulation software and addressed various issues that occur in dense wavelength division multiplexing like dispersion of signal, attenuation losses etc. In this system, we transmit thirty-two 10GHz signals modulated with carrier signals whose frequency are spaced 100GHz apart from one another are transmitted from transmitter and then multiplexed into single channel and on receiver side, received signal is demultiplexed, filter and amplified and thus successfully recovered signal. In using single mode optical fiber as transmission line, we find solutions to overcome dispersion, inter-symbol interference and attenuation by using EDFA (Optical fiber amplifier that is erbium doped) and DCF (Optical fiber used for compensation of dispersion) in propagation path and therefore we successfully received all original message signal with very good quality.

Keywords: Wavelength division multiplexing, inter-symbol interference, dispersion, attenuation loss

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Impact of Different Modulation Techniques for High Speed Dense Optical Communication Medium

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Abstract

We did the performance analysis of Free space optical communication system with varying atmospheric conditions in the paper, in which at the transmitter side we input three different independent data signals each with different modulation techniques (NRZ, DQPSK and PolSK) and transmitted it simultaneously through common channel and on receiver side extract each one of three signals separately and independently to each other. In this modulation scheme, three independent message signals are transmitted each at 40 Gbps through common channel, then it is received and three message signals are extracted from received signal. In clear whether conditions, we are able to the receiver transmitted 80 Gbps data through free space optical channel with reach of 8.7 kilometer having BER of approx. 10^{-9}. Also in the effect of atmosphere with eddies of different sizes and of different refractive indices due to variation in atmosphere and pressure along propagation path, the performance of suggested system is studied. The system which suggested also gives good performance with respect to link range, capacity of transmitting information and spectral efficiency in comparison to other systems that are proposed in past related to FSO transmission.

Keywords: BER (Bit error rate), orthogonal modulation, information capacity, PolSK

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The Analysis of COVID-19 Data: A Study

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Abstract

COVID-19 has shaken up the ground of human being and quickly became an Epidemic. The disease started in December 2019 at its epicenter of Wuhan, China. The continuously growing technology and medical facilities seems to face failure and it has shown that everything lay down the knees when it comes about handling Epidemic and pandemic diseases. In this paper, I have discussed about different Epidemics and Pandemics in history and how COVID-19 put an impact on whole world.

Keywords: Covid-19, pandemic, epidemic, disease

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Feature Set Evaluation Model for Opinion Fraud Detection

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Abstract

The volume of electronics has increased a lot over the years, mainly due to the popularity of e-commerce. Since this thunderstorm, we have seen a dramatic increase in the number of fraudulent cases, leading to a loss of billions of dollars each year worldwide. Therefore, it is important and necessary to develop and implement strategies that can help detect fraudulent Web sales. From a large amount of data generated from the transactions, getting the optimal set of features is a crucial task to identify fraud. Fraud detection is a specific anomaly detection application, characterized by significant imbalances between classes (e.g. fraud or dishonesty), which can be a destructive component of feature selection techniques. Further detection of fraud is a trivial and challenging problem

Therefore, manual labelling of reviews is difficult and ground truth information is often unavailable, which makes monitoring models less attractive to this problem. In this work we examine the effectiveness and impact of feature selection methods to detect deception in the Web Transaction environment, using supervised and semi-supervised techniques with the help of machine learning algorithms. We also aim to differentiate between the performances among the algorithms that are giving the best results for the datasets in detecting online reviews. We achieve the best performance in detecting fraud using the proposed method, reducing the number of symptoms.

Keywords: Fake reviews, online platform, Frauds, Machine learning algorithms, Products, Business, Supervised method, Semi-supervised method

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Reinforcing Cloud Execution using Stack Adjusting Strategy and Security Technique

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Abstract

Cloud enlisting gives affiliation of sharing data collecting most extraordinary and PC specialist over the Web and Intranet. Cloud headway has another strategy for wide scale disseminated figuring with five star presentation. It may be a add up to of wide get-together of geographically and persistently appropriated heterogeneous resources for enlightening wide scale data and methodology concentrated issues. The heterogeneous method for engineer selecting resource makes the advantage affiliation an basically risky occupation. Resource affiliation conditions a critical portion of the time connect resource introduction, resource observing, resource inventories, resource provisioning, charge detainment, arrange of autonomic limits and affiliation level affiliation works out. The exibility, security and affirmation of cloud organizations can be progressed by getting a handle on client driven get to control and character the authorities' plans. Late propels in cryptography and web advances enable us to structure.

Keywords: Approximately four key words or expressions in in sequential order arrange, isolated by commas.

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An Overview of Infectious Seasonal Disease Forecasting using Big Data Analysis

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Abstract

Big data can be defined as large amount of structures, unstructured and semi-structured data, used for inquiry for extracting knowledge. In the recent days there is an increase in health problems in majority of the population across the globe. The reason for health problems is not specific but it has become very uncertain. Now a day's many social networking users shares their health linked information on web. These type of health related information can use for forecasting of health diseases. Some diseases like asthma, high/low blood pressure, diabetes are most costly prolonged conditions in the world which cannot be cured. Machine learning in health care has recently made titles. Anyway precise and opportune observation information can control the diseases. Presently present clinical dataset can anticipate crises up to certain level yet can't deliver better outcome. A superior another for this is huge information. In this paper another novel strategy stands presented which gather results and expectation information from numerous interpersonal interaction locales like twitter, Google search. Specific classes can be made relying upon ailments. A summed up strategy is talked about in this paper which will anticipate the fore-coming strokes of various ailments relying upon information assembled by person to person communication locales.

Keywords: Big data, Disease Forecasting, Health issues, Machine Learning

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Secure Bio Metric Authentication using Visual Cryptography in Banking Sector

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Abstract

Today, the evolution of technologies has increased the level of data security. Use biometric methods to identify a person or verify the identity of a person based on their physiological or behavioral characteristics. In this method, the biometric template is stored in the centralized database, due to security threats, the biometric template may be modified or misused by the attacker. If the biometric template is updated, the authorized user will not be able to access that template. To solve this problem, this document proposes visual cryptography schemes that can be applied to secure the biometric template. Visual cryptography provides an additional layer of authentication. In the visual crypto scheme, divide an input fingerprint image divided into two shares. One share is keep with the participant in the form of an identification card and another share stored in the database. This share in the database will be the same for all participants. Upon accessing, two shares will be stacked and then you will get the original image. When we compare the image obtained with the new fingerprint provided, both match and the user identifies himself as an authorized user.

Keywords: Biometric template, Authentication, visual cryptography, Steganography and secret sharing.

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Access and Retrieve the Data in the Cloud by Using Python

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Abstract

Now a day's all the on-premise technologies are converted into Cloud based Technologies in software Industries. Cloud computing architecture is the most powerful foremost architecture for computer computation. Cloud computing providing services based on use and pay manner. This paper provides a concise evaluation of the cloud computing technologies. Along with the technologies is also discuss, how the data can be accessed from the cloud with the help of the python packages.

Keywords: Cloud computing, services, PaaS, IaaS, On-premise, Bucket

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FOCUS: Learning to Crawl Web Forums

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Abstract

In this paper, we present FoCUS (Forum Crawler Under Supervision), an administered web-scale discussion crawler. The objective of FoCUS is to just trawl significant gathering content from the web with insignificant overhead. Discussion strings contain data content that is the objective of gathering crawlers. In spite of the fact that discussions have various designs or styles and are controlled by various gathering programming bundles, they generally have comparative certain route ways associated by explicit URL types to lead clients from passage pages to string pages. In view of this perception, we lessen the web gathering creeping issue to a URL type acknowledgment issue and tell the best way to learn precise and powerful ordinary articulation examples of understood route ways from a consequently made preparing set utilizing collected outcomes from feeble page type classifiers. Hearty page type classifiers can be prepared from as not many as 5 commented on discussions and applied to a huge arrangement of concealed gatherings. Our test outcomes show that FoCUS accomplished over 98% adequacy and 97% inclusion on an enormous arrangement of test discussions fueled by more than 150 diverse gathering programming bundles.

Keywords: Center,WebCrawls

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A Brief Survey of Various Steganographic Techniques

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Abstract

Secure communication has become an important part to establish a connection so we make sure that no intruder is able to access our data hence steganography came into role. Steganography is defined as the "covered writing" or "hidden writing" which helps to make the data invisible for the intruder. The privacy of our data is managed so that no malicious attacker is able to access the data. This can be achieved by so many technologies, as we know that new technologies are emerging day by day so it is easy for us to achieve it. So, in this paper we are going to study few steganography techniques for the data privacy and security.

Keywords: Steganography, LSB, cryptography, MSB, DWT, DCT.

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Survey of Fake News Detection Techniques

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Abstract

Fake News Detection is a long-standing problem faced by most of us through online or offline news sources. Large numbers of tools are present worldwide to detect fake news. However, for full success, detection of fake news requires lots of research on existing tools, an add-on to the browser, etc. Fake news could be in any form, half fake, satire, mostly fake in text or any multimedia format. Here the paper presents a detailed study of fake news with its types, variations, and detailed discussion of each fake news category along with tools and existing methods used. In this paper, we will discuss some widely used fake news detection methods. Further, we analyze different features and drawbacks of Fake news detection methods and tools. There are many issues, and challenges still exist with many existing methods that are discussed in this work. Fake news detection is an evolving research problem that needs to be addressed with proper techniques and methods achieving efficiently and accurately.

***Keywords*:** Social Media, news data.

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Predictive Techniques Contributing Towards Recommender Systems Research

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Abstract

Recommender system helps user evaluate and find items of their interest. In this paper, we reviewed research articles on different recommender systems techniques from reputed journals. This paper addresses the techniques to generate recommendation based on three broad areas, data mining, machine learning and deep learning. Our review focuses on the two main task of recommendation that is, prediction and recommendation. The current scope and research techniques for recommender systems are discussed in this paper. A review of predictive techniques and challenges in recommender system research is also presented.

***Keywords*:** Recommender System, Data Mining, Machine Learning, Deep Learning.

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PAPER ID: ICRCSIT-0074

Analysis on Cloud Computing Vulnerabilities and Security Attacks with Industry Approaches

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Abstract

Cloud computing is the emerging technology in the area of distribution of data. Now a day's huge number of companies adopting this technology to maintain the business risk and sustainability. Cloud Computing facing many huddles like lack of adequate security, privacy and legal issues, resource allocation, control over data, system integrity, risk assessment, software vulnerabilities and so on which all have compromising effect in the cloud environment. This paper describes security issues and challenges in the cloud computing and provides some research methodologies for preserving precaution effect to vulnerabilities in the cloud environments and also discussed some industrial approaches.

***Keywords*:** Cloud Computing, Software Vulnerability, System Integrity, Distributed Systems.

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PAPER ID: ICRCSIT-0075

Sentiment Analysis on Masked Faces using Handcrafted Attentional Conv

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Abstract

COVID-19 is creating a devastating effect on world countries. To prevent the spread of pandemic every individual is following the precautionary measures by wearing masks and social distancing. Sentiment Analysis is the interpretation and classification of emotions as positive negative and neutral. These emotions can be in various forms like speech, text, and facial gestures. With the evolution of pandemic, its now the need of every individual to wear a mask and move ahead with the daily chores. In this scenario, Face recognition and emotion recognition becomes a difficult task. There are methods to identify facial emotions without masks, but facial emotion recognition of an individual with a mask is a challenging task. In this paper, we introduce a model to detect the emotion of an individual with a mask, and henceforth we can analyze the sentiments using deep learning techniques. This model can also be used in integration with multi-modal sentiment analysis, with data sets of face mask.

***Keywords*:** COVID-19, Face Mask, Emotion Recognition, Sentiment Analysis.

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PAPER ID: ICRCSIT-0079

Air Quality Monitoring System

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Abstract

The most disturbing issue in the broadly populated zones is the nature of air, where poor air quality has caused such huge numbers of passing's as indicated by a few overall examinations.Because of poor air quality people face numerous medical issues like danger of stroke, coronary illness, lung malignant growth, asthma and others too. In addition to this the air pollutants can cause acid rains, global warming, climate changes and also disturbs the plant growth. Henceforth, it is important to control and measure the air quality with great and present day advances like Internet of Things (IoT). IoT is a system of web associated gadgets ready to gather, sense and trade the information. In this paper, the air quality checking framework can be executed by IOT innovation with different sensors like MQ135 to sense pollutants in the air and that data can be stored in cloud based platforms like ThingSpeak for quality patterns and then giving the alert message through web messaging service to the people. It is useful in observing residue particles, carbon dioxide, carbon monoxide, nitrogen dioxide and sulphur dioxide levels in air.

Keywords: Air pollution, IoT, MQ135 sensor, ThingSpeak (cloud).

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Using Moodle – Implementation of an Open Source Leaning Management System and its Resources in Engineering Education

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Abstract

Moodle is an online E-learning management system and an open source platform which is designed to provide an engineering education a new way to create personalized learning enviourment for Education Domain. Online learning management system offers various provisions such as to share notes, assignment, conduction of activities grading of students after submission of assignment. Our institute successfully implemented Moodle for under graduates engineering and postgraduate programs. This paper presents how a moodle can be implemented based on an experience and how the resources can be used for educational domain.

Keywords: LMS, Moodle, Installation, Activities, Resources, Education

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PAPER ID: ICRCSIT-0082

Prospective Analysis with Expansion Monitoring System and Its Applications

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Abstract

Application is deliberate and intent to bring out, clarify, examine or analyzes the essentials, and overseeing the parts of budgetary requirements of complex association. The monetary status, processing, execution and any changes made in budgetary value position of a given ventures being explained, given clarity and identified with a money related association stand. Explanations increasing their productivity, extensive variety of clients for financial opinion on settling down. All the complicated related queries of budgetary information can be caught at a single hub which is clubbed together under single software. Includes assets list and claims in balance sheets, trial balances, income related multi product and client based reports, tax management and cash flow reports. The software is provided with a customized opinion for each and every individual client who is using, as a impact on or for style of working. Automated and complication related financial calculations can be obtained and maintained. The desire, needful, an exposure to automate the bank feeds and account statements management and tracking, the error detection is made simpler and easier. Here live updating shown and managed, the payment integration with security encryptions is managed.

***Keywords*:** Databases, User interface, System Reports, Analysis, and Dashboard.

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Efficiency of Virtual Machine Migration Techniques in Cloud Computing

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Abstract

Attainable answers for Cloud Computing through Efficient Virtual Machine Migration to decrease limit personal time on moving the condition of a VM from one physical area to another. Heterogeneous outstanding burdens can be solidified in a superior manner by combining the virtual machines. Virtualization innovations, on which Cloud figuring situations vigorously depend on, give the capacity to move VMs between physical hubs utilizing live or disconnected relocation. This empowers the strategy of dynamic solidification of VMs to a negligible number of hubs as indicated by current asset necessities. The issue is to figure out what sort of uses can be designated to a solitary host that will give the most productive by and large utilization of the assets. Current ways to deal with Efficient VM movement of outstanding burdens in server farms doesn't explore the issue of consolidating various kinds of remaining task at hand. The point of this work is to merge the heterogeneous remaining tasks at hand in a proficient manner with the goal that asset use ought to be amplified and vitality utilization of the server farm ought to be limited which will bring about the less number of personal time and limiting asset use.

***Keywords*:** Cloud Computing, Virtualization**.**

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A Survey on Energy Efficiency in Mobility Management for 5G Heterogeneous Cloud Radio Access Network

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Abstract

Traditional architectures of cellular networks are facing tremendous challenges due to increase in high power consumption, mobile data traffic and limited spectrum availability. In light of this, industries as well as research communities are in constant search for fundamental achievements in developing novel network architectures for supporting the user demand, while reducing capital and operational expenditures for network operators. Cloud radio access network (C-RAN) architecture is such a paradigm shifting concept for cellular networks, which is also being actively considered as a major candidate for future 5G cellular systems. This proposal presents a comprehensive survey on the most recent advances in C-RAN research focusing on the analysis and enhancement of its various major aspects. In particular, after reviewing the works on C-RAN architectures, then focus on the papers published specifically on the energy efficiency of C-RAN based cellular networks.

***Keywords*:** C-RAN, Energy efficiency, 5G cellular networks.

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A Data Mining Framework for the Prediction of Life Style Diseases

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Abstract

This paper focuses on designing a data mining framework for the prediction of life style diseases among corporate workers using Data Mining Classification and Prediction techniques for the restoration of wellbeing. This paper intended to assess impact of early life style interventions in predicted likelihood ratio of life style. To increase the life expectancy of an individual or low social economical group, to reduce premature deaths, to decrease morbidity and mortality of people among society and to reduce the cost of treatment due to reduced complications caused due to early prediction of Non Communicable as in low-resource settings as the health-care costs for Non Communicable Diseases quickly drain household resources of a salaried person. Data Mining Techniques and models plays a vital role in taking business related decisions and executing real time data to predict likelihood of diseases due to their sedimentary life style. The idea is to use models to identify patterns and information in health care database. A conceptual model based on CRISP-DM is designed to discover knowledge for prediction.

***Keywords*:** Data Mining, Coronary Heart Diseases, Crisp- DM, Predictive Analysis, Decision Making.

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Agriculture Applications using Cloud Computing

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Abstract

Agriculture is the backbone of most of the countries.The world is witnessing a rapid loss in thefield. The loss of loss of agricultural land and biodiversity worldwide are increasing day by day. The agriculture farms mostly depends the climate. The change in the weather can be one of the reason for such changes in the field of agriculture. The grip of future is slipping to a serious effect. Increase of world population. The effect of weather conditions is one of the reason.Scarce resources are projecting a grim picture of the futuredue to the adverse weather conditions which are being induced by climate change and an increase in the world population .There is necessity to change the trend where the situations are to be normaled.The Cloud Computing technology is an asset which can alter the trend. The concept behind cloud computing is a gaining asset for the agriculture. The GPS coordinators are able to give an accuracy while monitoring the tools that collect the soil datausing sensors and from human actors on the land. Sensors are now able to detect the location of a bale of hay in a field, as well as the amount of moisture it contains. Using the cloud computing the Farmers can access information from predictive analysis institutes.It is very necessary to know the accurate prediction on products that are in demand by different markets and adjust production accordingly. They are also able to have insight on weather conditions and other parameters affecting production. Knowledge-based repositories are to be used which contain information regarding to farming practices, crops input, agricultural innovations, pesticides, seeds, fertilizers, nutrients and weed resistance, as well as on equipment. This paper discusses about how the field of Agriculture can be groomed with the help of technology specially the Cloud Computing.

Keywords: Cloud Computing, Sensors, Iot

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Development of Exchange Market Trade Application

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Abstract

BBXT TRADE "APPLICATION SYSTEM" is software developed for managing various prices of market symbols. It is the desktop application which written in .NET Framework.In global there are so many stock market exchanges market symbols are there and having market symbols data for each exchange order book data and trade transaction data these and all data are tracking in the desktop application. This particular project deals with tracking the market symbols data and showing the data in the market access viewer.It contains orderbook data transaction details of market symbols.In this application easy to check market symbols data. The BBXT TRADE APPLICATION is one of the desktop application which is written in c# programming language and using .NET framework. The project defines that showing the stock market exchange data like orderbook data, trade transaction data and timestamp of market symbol transactions in the Market Access Viewer. Each exchange have many market symbols which are BYBIT exchange have BTCUSD.

***Keywords*:** Websocket endpoint,Rest endpoint,.NET Framework, Orderbook data,Trade data, Connection Pool,Json Parser Library,WPF,Data Binding.

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Diabetic Retinopathy detecting using Kernel PCA

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Abstract

Diabetic Retinopathy is the most regular motive of avoidable imaginative and prescient impairment, mainly affecting the operating-age populace inside the world. Recent studies has given a higher information of the requirement in clinical eye care exercise tofind better and cheaper ways of identification, management, diagnosis and remedy of retinal disease. The significance of diabetic retinopathy screening applications and issue in reaching reliable early analysis of diabetic retinopathy at an inexpensive value needs attention to develop computer-aided diagnosis tool. Computer-aided disease diagnosis in retinal image analysis could ease mass screening of populations with diabetes mellitus and help clinicians in utilizing their time more efficiently. The latest technological advances in computing power, communication systems, and machine learning techniques provide opportunities to the biomedical engineers and computer scientists to satisfy the requirements of clinical practice. In this paper proposed kernel PCA is used to feature selection, classifiers which include Support Vector Machine (SVM), KNN, Random Forests, Gradient boosting, AdaBoost, Naive Bayes used to detect the DR. Each algorithm is compared to other algorithms.

Keywords: Diabetic Retinopathy, SVM, KNN, Random forest, Gradient Boost, Adaboost, Naïvebayes.

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Sign Language to Speech Conversion using Transfer Learning on Convolutional Neural Network

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Abstract

Human beings interact with each other, either using natural language channels such as words, writing or by body language (gestures) e.g. hand ges- tures, head gestures, facial expression, lip motion and so on. As understanding natural language is impor- tant, understanding sign language is just as important. The sign language is the basic communication method within the hearing-disabled community. People with hearing disabilities face problems while communicat- ing with others without a translator. For this reason, the implementation of a system that recognizes the sign language would have a significant impact on deaf person's lifestyle. Through our own research and de- velopment, we will be proposing a visual Hindi Sign Language Recognition System using image processing and neural network methodologies, to identify the char- acteristics of the hand in images taken from an image through a web camera. This approach will convert images of alphabets of the Hindi language gesture into a text and then convert it into audio. Identification of hand gestures from continuous frames will be done using a series of image processing operations. Inter- pretation of signs and corresponding meaning will be identified by implementing transfer learning on an ex- isting machine learning model (Inception V3). Finally, the displayed text will be converted into speech using a speech API.

Keywords: Indian Sign Language (ISL), Hindi Sign Language, Tensorflow, Inception V3, Convolu- tional Neural Network (CNN), Hand Gesture Recogni- tion, Transfer Learning

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Finest Granularity of Cluster Crime Data using Structural Risk Minimization

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Abstract

Over the last several years, machine learning methods are particularly when applied to Structural Risk Minimization (SRM) have played and increasing the important role in the design of systems. It is reasoned that availability of learning methods has been curtail factors in the recent success crime rate applications. In this paper we proposed a structural risk minimization is an inductive principle of use in machine learning, usually in machine learning is a generalized model must be selected from finite cluster datasets with the resulting problem of over fit the individuals behavior is understood and analyzed with actuary science because activities or organization are taking an intersecting personal security and list of their clients is the model becoming too strongly tailored particularity of the training set and generalize purely to new data. The principle address of this problem by balancing a model complexity against its success at fitting the training data.

***Keywords*:** Machine Learning, Structural Risk Minimization, Cluster, Security, etc.

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Diabetes Detection using IoT Techniques and Platforms: A Survey

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Abstract

The advancement of technologies and chronic lifestyles the millions of people affected with significant, no diseases. Diabetes Mellitus is one of them around 30.3 million people in the world concerned with it. Internet of Things makes use of mobile technologies has been developing to analyze the risk of patients, which monitors calories, medicine doses, blood pressure, and blood glucose, etc. Due to the advancements of such technologies, Diabetic patients can monitor their physical activities and the vital sign of diabetes. The patient monitoring also gets time to time messages with the help of these techniques. This paper conducts a methodological review of current IoT platforms, methods for prediction of diabetes. This study has observed that real-time communication between physicians and patients increased, and it should be necessary

***Keywords*:** Diabetes Mellitus, IoT, Machine Learning, Healthcare, Health Monitoring.

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Cross Layer Intrusion Detection System for Mobile Ad Hoc Networks using Hybrid Feature Selection and Support Vector Machines

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Abstract

The proliferation of mobile ad hoc networks and its critical applications require new security mechanisms to safeguard the network. Intrusion Detection System (IDS) is a major line of defence for protecting the network from various attacks. Data collected for intrusion detection system contains redundant and irrelevant information. Inclusion of these features result in poor predictions and high computational overhead. Selecting the best set of features from the data set is used to increase the detection accuracy and efficiency of the IDS. Therefore, in this research, a new feature selection method based on rough set theory and improved genetic algorithm is proposed. Initially, the redundant features are eliminated with rough set theory; then the optimal feature subset is found out through the genetic feature selection. Then support vector machine is used for classifying the data set. The experiment results are validated through ns-2 simulations. The efficiency of the IDS is analyzed with varying network conditions by simulating most prominent routing attacks such as route disruption, route invasion, node isolation and resource consumption. The performance of the system is evaluated with the metrics detection rate, false alarm rate and processing time. The experiment result shows that the proposed method improves the accuracy and efficiency of intrusion detection system compared with other feature selection methods.

Keywords: mobile ad hoc networks, cross layer intrusion detection, rough set theory, genetic algorithm, feature selection, support vector machine.

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A Survey on Disease Identification of Plants and Crops using Image Processing

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Abstract

This paper provides survey on different techniques that are used for plant and crop disease classification. A farmer cannot identify the symptoms causing to plants or crops by the naked eye. So, crop protection can be done by using computerized image processing technique that can detect diseased section of plants, fruits or crops. There are many classification techniques such as k-Nearest Neighbor Classifier, Probabilistic Neural Network, Genetic Algorithm, Support Vector Machine, and Principal Component Analysis, Artificial neural network, Fuzzy logic. Selecting among the classification method is always a difficult task because the result can vary for different types of input data. This paper provides an overview of different classification techniques used for plant and crop disease classification

***Keywords*:** k-nearest neighbor, PNN, SVM.

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A BigTable Based Cloud Infrastructure for Effectively and Efficiently Managing Extensive Data Base

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Abstract

This research paper proposes a novel work for efficient as well as effective way to administer extensive database defining in Google Cloud infrastructure provided services which is useful for Cloud BigTable where BigTable act as data layer and for processing layer Hbase and MapReduce are uses. At this end, Cloud advancements offer a few enhancement openings that might be utilized in this field. Cloud Computing or Distributed computing is an effective computational view for overseeing and handling enormous information stores, principally on account of its imaginative illustrations known under the expressions "Database as a Service" (DaaS). Here we provide a novel tools, architecture and technique of our research infrastructure with its environment evaluation of different experiments are performed in platform using Google Cloud [1]. Experiments show clearly and commit the advantages, efficiency and throughput of the proposed research work.

***Keywords*:** GCC or (Google Cloud computing), Google File System, MapReduce, HBase, Bigtable, Database etc...

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Detecting Fake Social Profiles in Twitter using Machine Learning Models

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Abstract

Twitter being one of the initial online social media platforms to allow bots to autonomously perform operations like tweeting, re-tweeting, liking, following and much more. An estimate of two-third of the tweeted links in popular websites is posted by these bots. In order to ensure the information shared across the platform through conversations is credible, there is a need to focus on identification of spam bots. This will be an effort to prevent malicious automation from disrupting user's experience on twitter.Motivated by the need to identify and filter out the spam bots we have come up with an approach to distinguish between genuine accounts and spam twitter bots.This results in a robust model which can detect bots by leveraging only a minimum number of features allowing to exploit the additional features that consists of user meta-data.The goal is to have solution which can suggest the chances of an account being a spam-bot from the very beginning of the creation of the account. Twitter is a new web application playing dual roles of online social networking and microblogging. Users communicate with each other by publishing text-based posts.The popularity and open structure of Twitter have attracted a large number of automated programs, known as bots, which appear to be a double-edged sword to Twitter. Legitimate bots generate a large amount of benign tweets delivering news and updating feeds, while malicious bots spread spam or malicious contents. To assist human users in identifying who they are interacting with, this paper focuses on the classification of human and bot accounts on Twitter.We first conduct a set of large-scale measurements with a collection of over 500,000 accounts. We observe the difference among human and bot in terms of tweeting behavior, tweet content, and account properties.

Keywords: Twitter, Fake profiles, Legitimate and Classification

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PAPER ID: ICRCSIT-0100

A New Approach for Implementing Big data Analytics in Multi Cloud Environment

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Abstract

Within the beyond decades with the rise of Big data, cloud computing and IoT the world has visible an explosion within the way data is generated, saved and analysed. Data analytics has turn out to be the driving component of many companies, a lot of which are interlinked with one another or perform in various components of the world. Statistics storage is now very lots geographically allotted, and the era of dedicated datacentres is long long gone. Currently, there are many scenarios wherein records resides on numerous datacentres or cloud, that have heterogenous computational capacity, network potential and are geographically disbursed. Unfortunately, the cutting-edge paradigms available carry out poorly in such scenarios. This has given rise to the want for a computational paradigm that is able to analysing data over a geo graphically allotted surroundings. In this paper we propose using a hierarchical framework to improve the overall performance of Hadoop in a multi cloud or a geographically allotted surroundings. We have selected Hadoop because of it being an implementation of the popular map reduce paradigm. The framework basically dictates the use of quality viable activity scheduling technique for use in a geo dispensed surroundings by using keeping the Hadoop framework intact. The low-stage computations could be taken care of through the plain Hadoop implementation, however the activity scheduling and the statistics distribution is in which the proposed framework shines. Our number one consciousness in these paintings has been to setup a software prototype of the execution environment to explain, devise and calculate elements that would be vital in predicting the fine execution course and the facts division method. We have been a hit in putting in a semi digital prototype surroundings the use of three machines, the prototype met all of the theoretical and realistic benchmarks as a geo distributed multi cloud environment. Test runs were performed, and the two primary factors specifically computational component and discount thing have been calculated.

Keywords: Big data, Paradigms and prototype.

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Automated Dynamic Malware Analysis Engine for Guarding against Sandbox Aware Malware

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Abstract

Because of increment in variety of internet associated gadgets, malware infections and data breaches became so common. In recent times, malwares are intelligent enough to notice sandboxing, and they are capable of adjusting their behavior to evade detection. Sandboxing could be a mechanism that runs a program in a very protected environment. Scalability, Perceptibility and Opposition to detection are essential for any malware analysis sandbox. Malware is any piece of program that was written with an intention to wreck devices, stealing information, and usually inflicting a mess. To discover and guard against advanced malware infections, one should know how to handle the content that is reaching their device. The aim of proposed research is to suppress sandbox-aware malware from reaching a client and it's primarily being targeted on cloud-based solution for detecting suspicious malware that is aware of sandboxing.

***Keywords*:** Sandbox-aware malware, Cloud Computing, Virtual browser.

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A Survey on Distributed ARM

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Abstract

Distributed Association Rule Mining has become a central topic in Data Mining in recent years. Because of its broad applicability it attracts more focus. Distributed Association rule mining is usually performed in the generation of frequent itemsets and rule generation, in which many successful algorithms were presented by many researchers. This paper is intended to provide a theoretical survey of some of the current algorithms. At the beginning, the principles behind association rules are given followed by an overview of some of the preceding research work done in this field. The advantages and limitations are discussed, and an inference is concluded. In a distributed environment, algorithms such as Fast Distributed Mining (FDM) and Count Distribution Algorithm (CDA) were used for the association rule mining. But, when it comes to dynamically streaming data, those algorithms prove inefficient.

Keywords: Data Mining, Association rule, frequent itemsets

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An Empirical Study on Users Perception Towards Adoption of Digital Payment Methods with Reference to Vijayawada City, Andhra Pradesh

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Abstract

With the entry of Indian government policies like demonetisation, digital India there is a rapid growth of cash less transactions, digital payment methods in India. Citizens are adopting digital transactions in their daily life style. They are searching for new means of digital transactions. Indian government is also encouraging new innovations in digital payments. We have different digital payment methods like internet banking, mobile banking, electronic wallets, unified payment interface, Micro atm,credit and debit cards, aadhaar enabled payment services, Unstructured Supplementary Service Data etc…This study is an attempt to analyse users perception towards adoption of digital payment methods in their daily life by using users perception model .This study mainly considers various variables like perceived usability, perceived desirability, perceived accessibility, perceived feasibility, performance expectancy, effort expectancy, social influence, facilitating conditions, perceived cost, perceived protection and perceived comfort will influence the users adoption of digital payment methods.

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PAPER ID: ICRCSIT-0104

Secure Digital Payment

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Abstract

Today the greater part of the individuals uses internet business applications and other application to do shopping and to do different exchanges through Debit cards, Credit cards, web-based banking, Google Pay, PayPal and so forth. Security is the key component to accomplishment of any application. Consequently, it's important to protect security and security to our financial balance with the goal that our own and record details won't be uncovered to these applications. In the proposed frameworks computerized tokens are utilized alongside the Block affix innovation to give security to our own and record subtleties. For a similar enough proof is noted.

Keywords: Block chain, Card payment, Digital Tokens, AES Algorithm

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PAPER ID: ICRCSIT-0105

Deep Learning for Personality Assessment of Candidates in Recruitment

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Abstract

The Human Resources Management team has many crucial functions to perform in realizing the vision and mission of any organization. One among the functions is recruitment. Hiring the right candidate for the right position is a complex task that presents multiple challenges to the Human resources manager. Dealing with a large number of applicants is one of them. Examination of the CVs of all the applicants and selecting those which exhibit a high degree of match with the required skills is a time consuming task. Machine learning is well suited for such tasks which require extraction of features from data. Supervised machine learning algorithms are capable of learning the model used for ranking the candidates based on their relevancy to the job when fed with data pertaining to past recruitments. The present paper is an attempt to use deep learning for assessing a candidate's personality based on answers provided by the candidate to a set of questions. The set of questions and the scoring of certain responses provided by HR experts is used to train the machine learning system, which can then successfully predict the scorings for candidates.

Keywords: Machine learning, recruitment, candidate ranking, Deep learning, Personality Mining

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PAPER ID: ICRCSIT-0107

Internet of Things (IOT) in Multidisciplinary Research

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Abstract

Internet of Things (IOT) is one of the boom technologies in the world. The IOT is connection of things, devices, and objects through the network. It fills the gap between the real world and cyber world. This technology enables the world to achieve connectivity between objects by combining physical and digital world; through various objects such as actuators, processors, sensors which communicate over the internet. A Power Compensator is installed in a remote village of Warangal district. In this paper we apply the IOT technology to the electrical device Power compensator, to monitor about the power factor and other transmission line parameters remotely. IOT technology is used to monitor the health conditions of the Power Compensator and observed through Gmail.

Keywords: Internet of Things (IOT), Power compensator, JAVA, MATLAB.

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PAPER ID: ICRCSIT-0108

A Study on Robotic Process Automation (RPA) and Impact of its Tools across Industries

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Abstract

Robotic Process automation software works best when an organization requires structured data to automate existing tasks. Automating tasks and cost-cutting at the same time, is one of the main concerns for any enterprise. Every organization seeks ways to increase profit margins and productivity, here RPA can assist. When the process is rules-based and template-driven, with data repetitively recorded into a specific field; RPA can guide the workflow. This software can also be used to check human work (or vice versa) to find an error and migrate data between systems. RPA is increasingly becoming an enterprise-level opportunity. While RPA is adopted across industries, a few industries have taken the lead. Industries like Banking and Finance, Insurance, Healthcare and Retail are top on using RPA. Even this RPA can be adopted in Academics for the scenario of result analysis. Together these industries account for 66% of the RPA spend.

With the help of RPA tools in multi industries, increases productivity, better quality work and making position strong in market. Even before Robotic Process Automation came into the picture, enterprises were using automation tools for processing tasks with simple hacks, excel automation, and macros. They were not scalable or reliable still they increased the productivity of employees. The impact of top 5 RPA tools described best in the market are Kofax Kapow, Blue Prism, UiPath, Automation Anywhere and NICE. These tools are used in multi industry for automated tasks which increases cost cutting.

Keywords: Robotic Process Automation, Business Process, Service Automation, Software Robot, RPA tools.

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Analysis of Cancer Rehabilitation through AI and IoT

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Abstract

Based on the advantages of Internet of things, this paper focuses on the research of intelligent recommendation model for cancer patients' rehabilitation, and designs a user-friendly intelligent recommendation system of cancer rehabilitation scheme. In view of the uncertainty of the cause and time of recurrence of cancer patients, the convolutional neural network algorithm was used to predict both of them. The results predicted using the model showed that the prediction accuracy was high, reaching 90% above. To solve the issue of the optimal nutrition program for the rehabilitation of cancer patients, we preferred the recurrence time as the function objective, and established the recommendation model of the nutrition supported procedure for the rehabilitation by using BAS algorithm. With the use of framework of Internet of things technology, the intelligent recommendation model of cancer rehabilitation prediction model and nutrition support program was integrated to realize the recommendation system of intelligent method of rehabilitation nutrition support program for cancer rehabilitation patients with respect to their different characteristics. After the simulation experiment, identified that under the condition that the predicted recurrence location was almost unchanged (49% of simulation results and 50% of actual results), the nutritional support scheme recommended by the intelligent recommendation system could extend the postoperative recurrence time of patients by more than 90%. This recommendation system can help doctor's select personalized nutrition and rehabilitation programs suitable for patients in the later stage of rehabilitation treatment according to different cancer patients, and has certain guiding significance for the field of cancer rehabilitation.

Keywords: IoT, CNN, BAS, cancer recovery, artificial intelligent recommendation system

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IoT: Issues and Challenges in Indian Perspective

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Abstract

The Internet of Things is a set of embedded technologies that contain physical objects and are used to communicate with and interact with internal states or external environments. IoT prioritizes machine-to-machine communication, rather than communication to the public. This paper uncovers the state of IoT growth in India and also addresses the challenges of security issues. Finally, this paper reviews the risk factor, security issues and challenges from an Indian perspective.

Keywords: Internet of Things (IoT), Challenges, Interoperability, Authenticity..

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Yolo Model to Predict Object in Crimes and Crowds

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Abstract

Proficient and real item revelation has been a fundamental point inside the movement of PC vision structures. With the passage of profound learning frameworks, the exactness for thing disclosure has expand unquestionably. The task intends to consolidate dynamic procedure for object discovery with the objective of accomplishing high precision with ongoing execution. A major test in a few of the article discovery frameworks is that the reliance on elective workstation vision strategies for serving to the deep learning based for the most part approach, that outcomes in moderate and non-ideal execution. This paper manages the part of PC vision, mainly for the machine of deep learning in article identification task. From one perspective, there's a clear blueprint of the datasets and deep learning calculations typically utilized in workstation vision. On the contrary hand, a spic and span dataset is made per those regularly utilized datasets, and choose one among the systems known as speedier r-cnn to figure on this new dataset. Through the test to fortify the comprehension of those systems and through the examination of the outcomes get familiar with the significance of deep learning innovation, and in this way the significance of the dataset for deep learning.

Keywords: Deep learning; neural network; faster r-cnn, dataset.

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Secure Aware Cloud Applications with Software Development Life Cycle

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Abstract

Security has been always treated as an add-on feature in the software development lifecycle, and addressed by security professionals using firewalls, proxies, intrusion prevention systems, antivirus and platform security. Today software is the root of all computer security problems hence hackers don't concern about firewalls and other security methods but software is dependent on security measures other hand cloud computing is more powerful to store data in remote areas and it provides on-demand availability of computer systems. This papers deals with the security aware SDLC on cloud applications. The vulnerabilities are assessed before the applications are deployed into the cloud. Various methodologies such as simulation process model, Multiple filters (FISHER and Maximum Response filters) and ANNIGMA wrapper approach etc., were developed for software security approaches for software development lifecycle in cloud computing. However, limitations like lack of clear description of context, more duration time, expensiveness of models gave rise to our proposed model. This research paper proposes a unified modeling language-based secure software maintenance procedure, where the proposed method is applied for maintaining a large-scale medical database. For secure designing of Web applications, this paper proposes system security performance model for trusted operating system. For re-engineering and re-implementation process of Web applications, this paper proposes the model-driven round-trip engineering approach. In order to secure the medical data, this research work uses the Paillier encryption algorithm for encryption process. The re-engineering process are minimized by using optimization algorithm.

Keywords: ANNIGMA ,Re-engineering ,Model-driven round-trip approach,Paillier encryption

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Websites Short Content Understanding through Data Mining

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Abstract

Websites may be an area where people exchange and share knowledge related to this trends everyplace the earth. This express behavior of us of Americaers created us of America specialise in this logic that method these contents could lead on United States of America to the extraction this subject detection of interest between the users. For a qualitative analysis, we've got an inclination to propose to sight topic scales from topic modelers by filtering redundant actions from social Websites streams supported observation the temporal (behavior) aspects of users. we've got an inclination to face live aiming to proportion the projected approach to handle social streams in real time. we've got an inclination to propose a attainable model which can capture every ancient mentioning behavior of a user and jointly the frequency of users occurring in their mentions. The experiment show that the projected mention-anomaly based mostly} mostly} approaches can sight new topics a minimum of as early as Content-anomaly based approaches. a attainable model that captures every the quantity of mentions per post and frequency of mentioning. The Content frequency primarily based ways used to verify what range times the Content gets perennial and from that the perennial words area unit thought of.

Keywords: Websites , analysis, model, Content;

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Marathi Handwritten Numeral Recognition using Adaptive Neuro-Fuzzy System

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Abstract

Handwritten Character Recognition (HCR) is one of the areas in Pattern Recognition Field in which many researchers are attracted across the globe. This attraction is due to applications of HCR in many fields of daily use in real life. This paper investigates the problem of Marathi Handwritten Numeral Recognition (MHNR). The proposed System has mainly two modules: A Feature extraction module and Classification Module. In the featureextraction module, three different statistical features have been extracted and used for recognition systems. In the classification module, Adaptive Neuro Fuzzy System (ANFIS) has been proposed. It combines the advantages of ANN and Fuzzy Logic both. Hence it is found that the Neuro-Fuzzy hybrid system approach is effective in recognition of HCR. The Testing of the proposed system is done using 5-fold cross validation technique on a Local Database. Experimental Results showsthe high recognition accuracy.

Keywords: Neuro-Fuzzy, Handwritten Recognition.

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A Survey on Automatic Microaneurysm Detection Methods

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Abstract

A microaneurysm is a small red bump, formed in the sides of retinal veins. In diabetic patients, microaneurysms are occasionally identified in the retina of the eye. These swellings can erupt and leak blood from blood vessels. Microaneurysms can help to compute the progress of diabetic retinopathy, a disease in which veins of the retina are damaged by diabetes, which can lead to permanent vision loss. This paper reviews and compare several machine learning methods used in the early detection of Microaneurysms.

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PAPER ID: ICRCSIT-0117

Detection of Knee Osteoarthritis using SVM and CNN Classifiers

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Abstract

Osteoarthritis is a highly prevalent joint disease, affecting millions of people and it is more susceptible in elderly people. When the protective cartilage wears down, person experiences pain and difficult to move. On severe cases it may eventually necessitate total knee replacement. Hence, an accurate diagnosis is essential for the correct treatment of osteoarthritis. It is commonly diagnosed by experts through manual inspection of X-ray images. The early detection of osteoarthritis could help people to overcome the illness. In order to assist the radiologists, this paper focuses on automatically detecting osteoarthritis through image based deep learning algorithm. Knee osteoarthritis is detected and classified using Convolutional Neural Network (CNN) and the performance of CNN is compared with the Support Vector Machine (SVM).

Keywords: X-ray images, Osteoarthritis, Convolutional Neural Network.

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Extracting High Productive Item Sets using B+ Tree

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Abstract

The main purpose of this work is to develop a superior structure to extract top-K high productive itemsets. Here K is that the picked portion of high productive itemsets that's to be established. High productive itemsets tunneling is is unquestionably a distinguished study in process however the factors for setting minimum utility margin is definitely a tough task. throughout this work, degree inflated approach to extract top-k high productive itemsets named inflated top-K high productive itemsets tunneling (ETKU) is projected. ETKU uses B+ Tree organization rather than employing a Utility Pattern Tree (UP-Tree) organisation that's used in existing Top-K high productive itemsets tunneling (TKU) methodology. although TKU helps to chop back the time taken for the strategy of tunneling by reducing the complete vary of data scans to a try of, the standard lies within the UP-Tree traversal for getting potential top-K high productive itemsets. B+ Tree used in ETKU don't have knowledge related to interior nodes thus further keys will work into the memory. The leaf nodes of B+ Tree ar linearly coupled, thus a full scan of a tree wishes only 1 linear vogue all the leaf nodes.

Keywords: Top-K high productive itemsets tunneling, transaction weighted utilization, minimum utility, B+ Tree, UP-Tree, frequent itemsets mining;

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Ang : A Cross-Platform Mobile Application to Monitor the Availability of Human Organs for Transplantation at Hospitals in Real-time

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Abstract

Organ donation is the process when a person sanctions an organ of their own to be abstracted and transplanted to another person, licitly, either by consent while the donor is alive or departed with the assent of the next of kin. Organs and tissue that can be donated include heart, kidneys, lungs, pancreas, liver, intestines, corneas, skin, tendons, bone, nerve and heart valves. [1] Organ donation can only be considered after brain death has been declared by a physician. Here, we put forth a cross-platform mobile application named 'Ang' (अंग : Organ in Hindi) which will allow hospitals in real-time to update and monitor the information on possible organ harvest cases from a recently deceased human body or a brain dead person.

Keywords: Real-time, cross-platform, Organ donation, Transplantation, Hospital, Patient, Microservices, Cloud.

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Prediction System for Heart Disease using Rough Gaussian Naive Bayes Classifier

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Abstract

Heart diseases are becoming most fatal conditions in the world. Statistical information display the risk of cardiovascular disease by revealing the percentage of deaths worldwide caused due to heart attacks. Thus, there is an implicit necessity to predict this condition. The proper motto for this article is to develop an brilliant system using rough gaussian naive bayes classifier. Restorative data acquired from patients must be kept safely to proceed and utilize safely. By using this system we can retrieve the concealed information is taken from the stored information and then compare the patient values with trained dataset. By using this technique, it is very easy to predict the heart disease and can control the deaths caused due to heart attacks.

Keywords: Heart attack, Prediction, Gaussian Naive bayes, Data mining, K-means algorithm.

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Multi-path Channel Distribution in An Opportunistic Spectrum Access Network for Throughput Optimization using Network Coding

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Abstract

Opportunistic Spectrum Access Network is a network with an efficient channel distribution scheme can to a great level to pacify the spectrum resource sharing. Unlike earlier heuristic approaches, we accurately formulate the channel distribution and link scheduling problems. In this paper we proposed a dynamic channel distribution in all available links and randomized network coding based multipath solution for our crisis with the intention of optimizing the whole Opportunistic spectrum access network (OSAN) throughput. Through simulation results we proved our proposed work has increased the OSAN performance than existing schemes.

Keywords: Channel Distribution (CD), Cognitive radio (CR), Cognitive radio network (CRN), Dynamic Channel Distribution (DCD), Opportunistic Spectrum Access Network (OSAN).

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Automated Live Field Monitoring for Crop Prediction using AI and IOT Technologies

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Abstract

Farming segment is that the foundation of the Indian economy merits security. The incorporation of conventional procedure with the most recent advancements as Web of Things (IOT) and computer based intelligence can bring about farming modernization. In this way, as to have practical experience in water accessible to the plants at the ideal time, for that reason the vast majority of the rancher's burn through part of your time inside the fields. The proposed framework created on the information sent from the sensors and gauge the measure of water required. This gadget will be controlled and will help in examining the climatic states of the area. Untamed life checking and examination conduct, normal scenes of the creature identify procured by camera-trap organizes and makes the different sound that bothers the creature and furthermore cautions the individual by sending the message.

Keywords: Internet of Things, Artificial Intelligence, Crop Monitoring, Soil Moisture, Temperature, Raspberry pi.

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Internet of Things Based Smart Door Locking System using Arduino and ESP8266 Node MCU

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Abstract

With the most recent developments in emerging technologies, IoT stands dead set be the Cutting-Edge technology solving many security related problems. Here may be a Home security solution supported IoT, during this system we'll have a wireless module which connects to the net and communicates with the user through internet from anywhere within the world. User can lock his Home's door by employing a portable with an app installed in it. The most objective of this paper is to embed a locking system within the door with locking positions each individually controlled by the user using portable system. An extra feature which provides better security option is, user can use this technique in two modes. One is connecting to the net and also the other one is Hotspot mode, where user can hook up with local hotspot created by the system and monitor the house in and around a few range in meter.

Keywords: RFID, UWB, Solenoid lock, SSID

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DCCD - Detection & Classification of Cyber-attacks using Deep Neural network

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Abstract

Nowadays the network managers and system administrators are challenged by a rapidly growing mass of status information and an increasing volume of data sent through networks. As everyone is getting connected to the Internet, most of the businesses are using web applications as a medium of communication to provide service to their customers. With vast growth in the number of data breaches since in the past few years, web security has gained huge importance. In real-time performing this task with text-based tools is slow, difficult and inefficient. To exploit such vulnerabilities in the web application the Hackers are discovering new attack types and techniques day by day, to prevent these attacks they need to be identified correctly by the Intelligent intrusion detection systems (IDSs), and then proper responses should be outputted. Thus, providing a solution to the problem with the DCCD (Detection & Classification of Cyber-attacks using Deep neural network) application which is a deep neural network enabled IDS to detect web application attacks. The proposed DCCD application provides the experience of effectiveness with ease of usability and understanding ability for the purpose.

Keywords: Deep Neural Network, Cross site Scripting, SQL injection, Intrusion Detection System, Network Security, Web Application Attacks.

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PAPER ID: ICRCSIT-0127

Classifier for Music using Facial Emotion Recognition (FER)

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Abstract

The human face is an important part of an individual's body and it especially plays an important role in knowing an individual's mood. Extracting the required input from the human face can now be done directly using a camera. This input can then be used in many ways. One of the applications of this input can be for extracting the information to deduce the mood of an individual. This data can then be used to get a list of songs that comply with the mood derived from the input provided earlier. This eliminates the time consuming and tedious task of manually Segregating or grouping songs into different lists and helps in generating an appropriate playlist based on an individual's emotional features. Various algorithms have been developed and proposed for automating the playlist generation process. Facial Expression Based Music Player aims at scanning and interpreting the data and accordingly creating a playlist based the parameters provided. The scanning and interpreting includes audio feature extraction and classification to get a list of songs belonging to a similar genre or to get a list of similar sounding songs. Human emotions are meant for mutual understanding and sharing feelings and intentions. The emotions are manifested in verbal and facial expressions. Face detection has been around for ages. Taking a step forward, human emotion displayed by face and felt by brain, captured in either video, electric signal (EEG) or image form can be approximated. Human emotion detection is the need of the hour so that modern artificial intelligent systems can emulate and gauge reactions from face. This can be helpful to make informed decisions be it regarding identification of intent, promotion of offers or security related threats. Recognizing emotions from images or video is a trivial task for human eye, but proves to be very challenging for machines and requires many image processing techniques for feature extraction. Several machine learning algorithms are suitable for this job Any detection or recognition by machine learning requires training algorithm and then testing them on a suitable dataset. People of today's world are very indecisive even when it comes to the simplest of things like music.

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This project's purpose is to design a classifier that could be used to eliminate this confusion exhibited by people. This project is about building a music recommendation system for users. Such a system can not only be used to brighten up one's mood on a rainy weekend; especially in hospitals, other medical clinics, or public locations such as restaurants, this classifier could be used to spread positive mood among people. The project has to be implemented in 2 phases-facial emotion recognition and then suggestion of music based on the detected emotion in the previous phase. The emotional reaction to music is different for every person, so analysing it will not likely yield perfect results. The method used then is to decide upon certain base songs that very closely embody a certain mood, and to match songs to these specific categories. We can also study the efficacy of music stimuli to modify (reduce rather than induce) naturally occurring negative mood states (like sad, depressed, etc.) and to gradually bring about a change in this negative mood state turning it into a positive one. It could also simply be used just to prevent certain songs from having a negative impact on a person's mood.

Keywords: HAAR, KNN, SVM, DSL

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Forecasting the Growth and Movement of COVID-19 Pandemic using Machine Learning Algorithms

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Abstract

The Calamity explosion of Severe Acute Respiratory Syndrome - Corona virus (SARS-CoV-2) also known as COVID-2019 has brought the worldwide hazard to the living society. Corona viruses are Zoonotic, i.e. it can be transmitted between animals and human beings. The whole world is putting incredible efforts to fight against the growth of this life threatening disease. The artificial intelligence researchers are focusing their expertise to develop Intelligent models for analyzing this epidemic situation using worldwide shared data. The study points out the key factors that affect the growth of the virus, such as the basic reproduction sequence, virus incubation time period, and daily infection count. To contribute towards the well-being of living society, this article proposes to utilize the machine learning model with the aim for understanding its everyday rapid behaviour along with the prediction of future reachability of the COVID-2019 across the nations by utilizing the real-time information. At the same time, forecasting COVID-19 analysis help relevant countries to make decisions.

Keywords: Corona virus, Machine learning, deep learning

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PAPER ID: ICRCSIT-0129

A Survey on Various Melanoma Recognition Methods

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Abstract

Melanoma is a category of skin cancer and it is one of the most incurable increasing and deadliest skin cancer in the world. Due to lack of discrimination techniques between malign and benign melanoma recognition is a great challenge in the future medical field. This paper surveys the traditional and new trending technologies for skin cancer detections. Skin cancers are mainly two category- Benign and Malignant Cancerous. Melanoma skin cancer can be cured easily when it is identified at initial stage. Both benign and malignant melanoma conveys identical outer appearance at the early stages. So it is difficult to classify both benign and malign melanoma. This work focuses on comparing different types of melanoma detection and recognition. The most common methods used for classification are Artificial Neural Network, Support Vector Machine (SVM) and Deep Convolutional Neural Networks (CNN). In this paper, an elaborated literature review of current technology is made for melanoma cancer recognition and an accurate comparison among traditional state of art methods.

Keywords: Convolutional Neural Network (CNN), Melanoma Detection, Skin Cancer, Support Vector Machine (SVM), Ensemble model.

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A Study of Embedded Feature Selection Methods for Household Food Insecurity Classification on HICE Data

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Abstract

Feature selection is the process of choosing the most important features for a given task while discarding the noisy, unwanted and redundant features of the data set. The selection of features is important for many reasons, such as simplification, precision, computational efficiency and model interpretability. Classifiers such as K-Nearest Neighbor (KNN), Logistic Regression (LR), Support Vector Machine (SVM), Random Forest (RF) and Naive Bayes (NB) classifiers are used to evaluate the accuracy of the selected features. The experimental result shows that recursive feature elimination with RF classifier which score an accuracy of 99.9% and 100% ROC followed by KNN, SVM, LR and NB with an accuracy of 96.6%, 0.90.9%, 0.89% and 0.85% respectively.

Keywords: Feature Selection, Preprocessing, Calorie, Food insecurity, Classification, HICE

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Facial Recognition Voting System

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Abstract

Facial recognition is a classification of biometric programming which works by coordinating the facial conditions where light is sufficient. The restriction of this strategy is touchy for lighting conditions. This calculation is additionally exceptionally utilized for face acknowledgment. It utilizes head segment examination and direct discriminant investigation by which subspace projection framework will be developed. Not at all like Eigen face development process, the fisher face procedure takes the lattice and further, it changes over into a vector. It is as comparative as Eigen face in any case, discovered better outcomes on account of low light. The issue with this strategy is the trouble while building projection grid. For that, it needs more extra room highlights. will be studying the implementation of various algorithms in the field of secure voting methodology. There are three degrees of check which were utilized for the voters in our proposed framework. The first is UID confirmation, second is for the voter card number, and the third level of verification includes the use of various algorithms for facial recognition. In this paper, our system uses Haarcascade algorithm.

Keywords: Haarcascade algorithm, facial recognition, Voting system, Electronic Voting Machines (EVM), smart voting.

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PAPER ID: ICRCSIT-0132

Combination of Clinical Features and Attention Based Convolutional Neural Network for Glaucoma Detection

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Abstract

Glaucoma is a group of eye conditions that damage the optic nerve, the health of which is vital for good vision. This damage is often caused by an abnormally high pressure in the eye. Glaucoma is one of the leading causes of blindness for people over the age of 60. Different glaucoma spotting systems were developed for analyzing glaucoma at early stage but many of them lacked good accuracy of spotting. This paper put forward a two-stage framework that first analyzes the shape and size of the optic disc, which is used for better observation and localization and then classify it into healthy or glaucomatous. The first stage is based on time-invariant feature Cup to Disk ratio (CDR) and Neuro Retinal rim ratio (NRR) features. Optic disk segmentation is done by using morphological method and Otsu's thresholding is used for optic cup segmentation while the second stage uses attention-based Convolution Neural Network (CNN) to classify the extracted disc into healthy or glaucomatous. AG-CNN is sketched, including an attention prediction subnet for forecasting human attention, a pathological area localization subnet for finding the located pathological area, and a glaucoma classification subnet for identifying positive or negative glaucoma. The attention maps are used to forecast the attention prediction subnet to highpoint the pertinent regions for glaucoma spotting, using a weakly supervised training manner. Based on the difference compared to other attention-based CNN methods, the features are also envisioned as the localized pathological area, which are moreover added in the AG-CNN structure which helps to enhance the glaucoma spotting performance. At last these are compared with a public database and experiment results are found out. These experiment results shows that the new approach which is put forward significantly advances the most recent stage in glaucoma spotting.

Keywords: Glaucoma spotting, CDR, NRR, Pathological area, Attention prediction.

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Ultrasound Image Enhancement and Segmentation using Fuzzy Filter and Particle Swarm Optimization

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Abstract

In this paper segmentation algorithm are implemented a for Ultrasound image by Particle Swarm Optimization (PSO) k-Means clustering algorithm applying Fuzzy Filter. The purpose of medical image segmentation is to extract information such as volume, shape, motion of organs for detecting abnormalities from the medical image for improvement and fast diagnosis. Impulsive noise inherent in US image has been removed by using fuzzy filter. Then particleswarm optimization k-means clustering segmentation method is applied for partitioning Fetus Ultrasonic images into multiple segments, which applies an optimal suppression factor for the perfect clustering in the specified data set. Experimental results will show that the proposed algorithm outperforms other segmentation algorithms like seeded region growing using PSO, FCM and watershed in terms of segmentation accuracy for speckle noise added to Fetus US medical images.

Keywords: Ultrasound (US) Imaging, fuzzy filter, fuzzy c-mean segmentation, k-means segmentation, seeded region segmentation, watershed segmentation,particle swarm optimization PSO.

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An Unique Approach for Secure Protocols in Developed Cloud Computing

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Abstract

Cloud Computing (CC) has as of late developed in heterogeneous circulated figuring. Distributed computing gives a steady on demand for organize access to a mutual pool of configurable planning resources. Resources suggest processing applications, arrange resources, stages, programming administrations, virtual servers, and registering establishment. Resources insinuate figuring applications, arrange resources, stages, programming administrations, virtual servers, and registering establishment. Distributed computing can be considered as another getting ready extraordinary that can give benefits on request at an unessential expense. The propose appreciated and routinely utilized organization models as a bit of the cloud point of view are Software as a Service SaaS), Platform as an organization (PaaS), and establishment as a Service (IaaS). In this paper we propose Data security in cloud development thinking about shared pool of assets. In SaaS, programming with the related information is sent by a cloud provider affiliation, and customers can utilize it through the web programs. Information security in the distributed computing is more tangled than information security in the standard information structures. The fundamental issues in the distributed computing join asset security, asset organization, and asset checking. Before long, there are no standard statutes and headings to pass on applications in the cloud, and there is a nonappearance of guideline control in the cloud.

Keywords: data security, cloud computing (CC), shared pool.

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Energy Optimization using Improved Glow-worm Swarm Algorithm in MANET

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Abstract

Now-a-day infrastructure and resource efficient routing constraints are extremely significant for Mobile Ad-hoc Network (MANET) development. The proposal model aims to accomplish a particular MANET quality criterion. A novel search method for Swarm Intelligence and Functionality are being developed to build new routing algorithms to handle high energy. The protocol integrated on the basis of their configuration, capacity, computational complexity and establishment of the route. To test and compare MANET routing protocols for a network of wireless sensors. Swarm Intelligent has discovered that not only does it have resources and efficiency in both the routing and the consistency of the package distribution. Use the Feature Selection Process is to consider the best path from a possible route. This approach is designed to increase the efficiency of MANET and to discover the underlying properties of energy management. Current proposal Enhanced Swarm Intelligence Routing (ESR) Algorithm to provide usual simulation and routine metrics for comparing different protocols using a simulator based on NS2 and finding efficiency.

Keywords: MANET, Routing Algorithm, Energy Management, Performance Metrics.

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Information Security in Cloud Computing

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Abstract

Cloud computing provides way for storing, accessing, manipulating and management of Information based on PaaS, SaaS, IaaS, DaaS, Faas and DBaaS. Information is fact about an entity. Entity could be living object or nonliving subject. Information Security is big concern in today's world. There are dedicated hackers who hack the information and use the information for their benefit without permission. Cryptography and Steganography techniques together can be used for Information Security. This paper presents the different way of Information storage on Cloud and extraction of stored information from Cloud Computing platform. Encryption is first layer. Second layer is Split the Document and at third layer apply Steganography.

Keywords: Information Security, Steganography, Cryptography, Encryption, Decryption, Cloud Computing.

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A Modified PSO Algorithm Based Energy Efficient Tracking in Wireless Sensor Networks

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Abstract

When a drag is large or difficult to unravel, computers are often wont to find the answer . Traditional methods of finding the solution might not be enough. it'sin turning to nature that inspiration are often found to unravel these difficult problems. Nature-inspired algorithms are among the foremost powerful algorithms for optimization. This paper tends to provide a detailed information of the firefly algorithm in tracking method which will reduce by an accurate estimation of the target location. we'llcompare the firefly algorithm with the particle swarm optimization. Energy saving is that the critical issue for object tracking in sensor networks. the amount nodes surrounding the mobile target should be liable for observing the target to save lots of the energy consumption and extend the network lifetime. Simulations and results indicate that the proposed firefly algorithm is superior to particle swarm optimization .In particle swarm optimizationthis location of the thing and by probability best and Global best the longer term location of the object is determined and energy consumption is more compared to firefly algorithm. In firefly algorithm the past, present and future locations and path of the thing is decided , the accuracy is more and therefore the time consumption is a smaller amount within the mobile target.***Keywords***: Tracking , particle swarm optimization ,Mobilty based Tracking,Firefly.

KEYWORDS: Tracking ,particleswarm optimization,MobiltybasedTracking,Firefly.

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CapStyle - Stylized Image Captioning using Deep Learning Models

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Abstract

The development of deep neural networks comprising of CNNs and RNNs has made automatic image captioning a simpler task. However, the written descriptions lack style and a few non-factual aspects. One such style is presenting the description of the image with a set of adjectives which isvery common in day-to-day conversations as it effectively and strategically influences one's decisions due to its ability to make the object or the person to stand out either in the affirmativeor in a negative manner. We introduce a new dataset of stylized image captions derived from Flickr8k, named CapStyle5k and we design a system to describe an image and present a modelthat automatically generates captions for the image with styles embedded, using CapStyle5k. CapStyle involves experimentation on the variation of deep learning models which are enhanced by an Attention layer that generates captions with good accuracy. We show experimentally that the performance of CapStyleis competitive with the existing approaches for generating visual captions with styles, as evaluated by various automatic pre- defined metrics such as BLEU, ROUGE, METEOR, SPICE and CIDEr. Qualitatively, our model generates captions with adjectives embedded into them which describe the image in a naturalway.

Keywords: Deep Learning, Convolutional Neural Networks, Recurrent Neural Networks, Long Short-Term Memory, Gated Recurrent Unit, Image Captioning, Attention, Evaluation Metric.

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Skin Lesion Segmentation Based on CNN with Dilated Convolution

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Abstract

In a computer-aided diagnosis (CAD), Skin lesion segmentation has a vital role in diagnosis of skin cancer in its early stage. However, due to the variation in lesion appearance and different artifacts, diagnosis of skin cancer remains to be, is opening hot research area for researchers for multidisciplinary domains. In our work, we proposed an efficient way of skin lesion segmentation in the dermoscopic image based on deep learning framework. Our work uses a U-Net architecture with a slightly different organization and dilated convolutional block between the down-sampling and up-sampling stages. In order to segment the skin lesion from the input image, this method first encodes the image to extract the spatial features, and then passes through the dilation block to exploit global context features, finally decoding operation is performed to generate the segmentation map. The model was evaluated by the well known publicly available dataset, namely ISIC (International Skin Imaging Collaboration). We compare the experimental result with the latest works that are tested by the same dataset, i.e., ISIC. The proposed model achieved a result of 95.45%, 85.37%, and 78.10% for, Dice Coefficient, and Jaccard Index, respectively. Experimental results of the proposed work exhibits that it is effective, efficient and comparable when it is compared with the the state of the art method. In our future work, we are planning to extend it to newly emerging models and test it in additional dataset.

Keywords: Skin Lesion Segmentation, Deep Learning, U-Net, Dilated Convolution

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Tongue Image Analysis for Detection of Diabetes Mellitus using Color Features

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Abstract

Diabetes mellitus (DM) and its complications become one of the major health problems. Tongue diagnosis is an important diagnostic method in traditional Chinese medicine (TCM). The proposed paper explains how diabetes is detected in an early edge using a non-invasive approach as tongue image analysis.

The tongue image database is collected using a DSLR camera with specific resolution. The geodesic flow was evaluated in the lower part, and the Geo-gradient vector flow was evaluated in the upper part. Polar edge detector and ACM technique used for clearing edges during segmentation. Using the tongue color gamut, tongue foreground pixels are first extracted and assigned to one of 12 colors representing this gamut. The ratio of each color of the entire image is calculated and forms a tongue color feature vector. Experimenting 120 Healthy and 180 Disease tongue samples, results classified with an average accuracy of 84.34% using KNN and SVM classifier.

Keywords: Diabetes mellitus (DM), traditional, chinese medicine (TCM), active contour model (ACM), polar edge detector, KNN.

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An Integration of Scrum Methodology with IoT in Online Classes

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Abstract

In today's digital world each and every field is being digitalized including education. The necessity of traditional mode of teaching or learning is started decreasing and students are highly self-motivated to learn in the technology enabled environment. There is 'N' number of opportunities to explore the learning of students through online classes but still how effectively students are using these online classes is a very big question mark? At the same time in this modern society, the rapid development in technologies like Internet of Things network is also evolving in a fastest way and all are showing interest in these kinds of smart devices (IoT). On the other hand, scrum is an enhancement process that uses number of iterations and follows incremental approach to deliver high quality output. Therefore, this paper proposes an integration of these three concepts like scrum methodology that adapts to the IoT network features into the online classes.

Keywords: Scrum, Internet of Things, Smart devices, online class.

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Multi Species Distribution Modeling Through Multi-Label Adaptive Weighted Elastic Net

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Abstract

Prediction of multiple species in Species Distribution Modelling carries simultaneously carries advantages for the ecologist in testing ecological theory .This work proposes adaptive weighted elastic net and is applied to analyse the species distribution modelling. This regularised elastic net uses a positive constant γ and γ = 1. ( ) is used as an initial estimator in the regularised term. This work uses a subset of data from e-bird repository from January 2014 to December 2014 and January 2016 to December 2017. Monthly minimum, maximum and average temperature, daily minimum and maximum temperature and monthly precipitation (Rainfall) rate are used as predictors and Species Ashy.prinia, Asian.Brown.Flycatcher, Asian.Koel, Asian.Openbill, Asian.Palm.Swift and Barn.Swallow are used as response variable in this work. The work observes the following; Ashy.prinia completely avoids dry desert zone so negatively responded to monthly high temperature.. Ashy.prinia shows low correlation both for daily maximum. Asian.Brown.Flycatcher prefers winters in tropical southern Asia from southern India and so it positively response to monthly average temperature. Asian.Brown.Flycatcher responds positively to rainfall. Asian.Koel avoids precipitation so it negatively responds to precipitations. Asian.Openbill responds highly to monthly high temperature and low to precipitation values. Barn.Swallow avoids heavily precipitous areas.

Keywords: Multi-label learning, Elastic Net, Species Distribution Modelling, Logistic Regression

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Image Steganography for Providing Enhanced Medical Data Hiding

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Abstract

Information Security has always been a very substantial facet when it comes to hindering unauthorized access, destruction or inspection of confidential data. Today every field in the world makes use of multimedia information. There is a need to secure the confidential information used in these areas. There are multiple approaches to secure information. One of them is Steganography, which is nothing but hiding the information inside other data such that there is no detectable change in cover information. The auxiliary technique of securing information is cryptography, an encryption technique which scrambles the information into a scribbled form which is generally referred to as cipher. Both Steganography and Cryptography have their own advantages and limitations. Even though both methods provide security, to add multiple layers of security it is always a good practice to use Cryptography and Steganography together. So, when cryptography and steganography are used together, it results in a multi-layer security model. RDH is the one of the popular and highly recommended methods to enhance medical data security. RDH enables higher data capacity to be embedded without causing any significant impact on quality of medical images the main objective of the proposed work is to provide extra layer of security by introducing cryptography along with steganography to encrypt and embed the confidential information to be sent over a non-secure channel.

Keywords: Energy Efficiency, Underwater Acoustic Sensor Network, Artificial Fish Swarm Optimization, Shortest path Routing, Optimization.

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The Most Effective Method to Choose between Robotic Process Mechanization and Back-End System Automation

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Abstract

Late writing has recognized two primary sorts of IT-empowered development and marked them as lightweight IT and heavyweight IT. In this examination, we investigate mechanical procedure mechanization (RPA) as lightweight IT and conventional back-end framework computerization as heavyweight IT and study how a case organization Telco settles on the decision between these two elective methods of actualizing robotization. Drawing on an experimental examination led at Telco looking at two robotization ventures, we discover support for prior investigations tending to explicitly the decision issue of RPA. Our fundamental commitment lies in revealing the job of the two-dimensional element dependability on the decision. While heavyweight IT is favored when framework engineering is steady, lightweight IT, working on the introduction layer, holds an essential of stable framework interfaces.

Keywords: Robotic procedure mechanization, business process, lightweight IT, heavyweight IT, framework design.

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CHIRP – Method to Image Black Holes

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Abstract

Black holes are the most peculiar and enchanted objects that are existing in our universe. It is a region of space where the understanding of the universe is pushed to reach its limits by the extreme condition. Most of the astronomers dreamed about the invention of secret behind a black hole. After the combined effort of a group of scientists, finally the image of a black hole is revealed. In this paper, the technique behind the imaging of a black hole is explained.

Keywords: EHT, VLBI, CHIRP

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Enhancing Network Security in MANET using Novel Threat Detection and Mitigation Techniques

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Abstract

Mobile ad hoc Networks (MANET) have gained great importance owing to their dynamic characteristics and ease of deployment. Features of MANET such as shared medium and its ad hoc nature susceptible to extensive attacks. The routing protocols of MANET assume that the nodes of MANET are cooperative and participate in routing process. But many nodes behave as a malicious node and unveiling various attacks against routing protocols. It is very difficult to provide security to the MANET because of variety of attacks. It is essential to protect MANET to provide secure communication among nodes. In this paper three attack detection methods namely, multivariant mitigation model, quadratic route factor estimation model and route inference theory model have been introduced to detect and alleviate the attacks against MANET. The simulation results indicate that the proposed techniques efficiently detect and mitigate attacks against AODV routing protocol.

Keywords: Attack Detection System, Routing attacks, Multi-variant mitigation model, Quadratic route factor estimation, Route inference theory.

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Designing Construction Skill Tree implemented Cognitive Architecture [CSIA] for the Comparison with Thinking Layer Agent Agricultural Riped Fruit Plucking

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Abstract

Here is avast abundant demand aimed at mechanization in the field of agriculture. The improvement of Robotics technology is daily exponential this research paper primary concentrates in fruit-plucking robots. Implementing intelligent robotic machine learning to make the robot adapt itself in non-deterministic environment, which can work in the fields, with or without farmer. This paper is associated with aimed at to get the solutions and algorithms for computers to match human and non-human like behaviours, the ability to think, similar to peoples and animals in the everyday life. This Includes, testing cognitive principles of mind on robots. Performance evaluation of Industry or agriculture based robots in real time environment can be compared against human performance. Building robots using control architectures based on cognitive science, understanding the requirement of a farmers in the agriculture land, and implementing the intelligence device so that, machine can work as per the requirement of a farmer. For example land ploughing work, Fruit plucking etc.

Keywords: Cognitive architecture, CST [Constructing Skill Trees], Sensorimotor Skills.

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Applications of Big Data in Machine Learning

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Abstract

Data revolution has changed the whole world and taking it into new generation. Machine learning and Bigdata is the main cause for data revolution leading to a complete data of new formats and unparalleled data bases. The expansion in enormous measure of information has prompted an open door for Machine Learning and Bigdata to meet up and to create Machine Learning strategies which are fit to hold present information types and to explore huge measure of data with negligible or no human intervention. Machine Learning is capable to give flawless results by implementing fast and effective algorithms to process data. Machine Learning is most emerging wide range of areas that is being researched. For a pure Machine Learning process, the more data provided to the system, the more it can learn from it, returning the results that are looking for, and that's why it works well with Bigdata.The Machine Learning can keep running at its at the highest level with Bigdata.If the data is less then the machine has less examples to gain from, and subsequently its results may be influenced. This paper discusses about the applications and challenges of Machine Learning techniques, advanced learning methods towards Bigdata.

Keywords: Bigdata, Machine Learning

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An Effective Improvement on Selection Process in DNA Data

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Abstract

The information on forms identified with protein actuation is straightforwardly identified with a course of genes enactment and restraint. The investigation of gene expression permits us to choose differentially communicated genes possibly engaged with a comparative procedure. Be that as it may, a few genes with a typical organic trademark are not chosen as far as expression. The utilization of gene ontology which is a dependable wellspring of data on genes could direct and improve the gene selection process. In this paper, we propose another methodology that joins the co-expression of altogether and non-fundamentally communicated genes with their ontological data to improve the gene selection process in transcriptomics data.

Keywords: Classification, Expression Similarity, Semantic Similarity, DNA Microarray, Gene Selection, Gene Ontology

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Review of Computational Models of Consciousness

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Abstract

With the emergence of Artificial Intelligence, researchers are focused on adopting human intelligence in computers for decision making. Such intelligence generates in the mind through consciousness or thoughts. Consciousness refers to focusing attention, mental rehearsal, thinking, decision making, awareness, alert state of mind, voluntary actions, concept of self and internal talk. In the advanced era of Artificial Intelligence and Cognitive Science, mind's consciousness can be implemented in machines for better service to the mankind. In another way, researchers are trying to incorporate human thinking in the machine. Researchers have implemented various computational models of consciousness by considering the nature of working of the human brain. Objective of this paper is to review the existing research on the computational model of consciousness and proposing the novel approach for the generation of thoughts.

Keywords: Cognitive Science, Computational Model,Consciousness, Non-Axiomatic Logic, NAL, Abhidhamma, Buddhist Theory of Mind. Cognitive Models

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Virtual Mouse Based on Real Time Eye Gaze Estimation

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Abstract

This project describes a real- time contact-free eye-gaze tracking system that bases its accuracy in a very precise estimation of the pupil center. The eye camera follows the head movements maintaining the pupil centered in the image. When a tracking error is produced, the image from a camera with a wider field of view is used to locate the eye and quickly recover the tracking process.

Its special shape has been exploited to allow the optimization of the image processing algorithms developed for this system. After a calibration procedure, the line of gaze is determined by using the pupil-glint vector. The glints are validated using the iris outline with the purpose of avoiding the glint distortion due to the changes in the curvature on the ocular globe. The proposed algorithms determine the pupil center with sub-pixel resolution, minimizing the measurement error in the pupil-glint vector.

Keywords: Energy Efficiency, Underwater Acoustic Sensor Network, Artificial Fish Swarm Optimization, Shortest path Routing, Optimization.

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Classification on Grade, Winery and Price of Wine using Multi-Label Methods

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Abstract

Classifying wine according to winery, grade and price of a wine using multi-label methods .Using wine reviews as the attributes, we classify the grade, winery and price. There are three different approaches to this solve multi-label problems, they are 1)Problem Transformation 2)Adapted Algorithm 3)Ensemble Approach. This project is made by using Ensemble Approach. The algorithms used in ensemble approach are Random Forest , Decision Trees , Extra trees etc. Wine reviews are nothing but it contains some information about the wine like country, price, region, province, description, designation, winery, variety and grade. Grade is calculated using the quality of the wine is judged based on Wine Spectator's 100 point scale i.e., quality ranging from 80–84 is good, while 85–89 is very good, 90–94 is outstanding, and 95–100 is classic. In this project winery is also classified which is not done previously.

Keywords: Multi-label, Problem Transformation, Adapted Algorithm, Ensemble Approach, Random Forest , Decision Trees and Extra Trees.

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Human Hand Gestures Based & Voice Controlled Video Player

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Abstract

In this paper we have discussed a low cost system which uses open CV and NPL to control the VLC media player through human based hand gesture and speech. Human hand gesture recognition (HGR) is one of the main topics in the area of computer science as an effective approach for HCI(Human Computer Interaction). Our proposed project is an alternative to this, wherein we are developing a new technique to interact with the computer in a non-tangible way. This project describes about controlling video using gestures and speech. Instead of using a keyboard, mouse or joystick, we can use our hand gestures to control certain functions of a computer like to play/pause a video, increasing and decreasing of volume and forward and backward of video. This project also helps in controlling the VLC player using speech. This application uses the webcam to capture gesture by the user, also uses microphone to recognize the speech and performs basic operations such as play and pause, volume controls, forward and backward of the video.

Keywords: HCI, OpenCV, Speech Recognition, NPL.

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Fake Video Detection

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.

Abstract

Deep learning has been successfully applied to solve various complex problems ranging from big data analytics to computer vision and human-level control. Deep learning advances however have also been employed to create software that can cause threats to privacy, democracy and national security. One of those deep learning-powered applications recently emerged is "deep fake". Deep fake algorithms can create fake images and videos that humans cannot distinguish them from authentic ones. The proposal of technologies that can automatically detect and assess the integrity of digital visual media is therefore indispensable. This project involved a survey of algorithms used to create deep fakes and, more importantly, methods proposed to detect deep fakes in the literature to date. It also included extensive discussions on challenges, research trends and directions related to deep fake technologies. By reviewing the background of deep fakes and state-of-the-art deep fake detection methods, this project aims to build a classifier that runs on high-end hardware to detect deep fakes and further promote the progress of development happening in the area.

Keywords: deep learning, Deep fake algorithms, state-of-the-art.

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Cyber Breach Analysis

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Abstract

Analyzing cyber incident data sets is an important method for deepening our understanding of the evolution of the threat situation. This is a relatively new research topic, and many studies remain to be done. In this paper, we report a statistical analysis of a breach incident data set corresponding to 12 years (2005– 2017) of cyber hacking activities that include malware attacks. We show that, in contrast to the findings reported in the literature, both hacking breach incident interarrival times and breach sizes should be modelled by stochastic processes, rather than by distributions because they exhibit autocorrelations. Then, we propose particular stochastic process models to, respectively, fit the inter-arrival times and the breach sizes. We also show that these models can predict the inter-arrival times and the breach sizes. In order to get deeper insights into the evolution of hacking breach incidents, we conduct both qualitative and quantitative trend analyses on the data set. We draw a set of cybersecurity insights, including that the threat of cyber hacks is indeed getting worse in terms of their frequency, but not in terms of the magnitude of their damage.

Keywords: Cyber incident, breach, models.

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Fraud and Malware Detection in Mobile Applications

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Abstract

This paper deals with the fraudulent behavior in Google Play, which is most popular Android app market, fuel search rank abuse and Malware proliferation. To identify malware, Pervious work has focused on app executable and permission analysis. In this we introduce fair play, a novel system that discovers and leverages traces left behind by fraudsters, to detect both malware and apps subjected to search rank fraud .Fair Play corelates review activities and uniquely combines detected review relations with linguistic and behavioral signals gleaned from Google Play app data, in order to identify suspicious apps. Fair Play achieves over 95% accuracy in classifying gold standard datasets of malware, fraudulent and legitimate apps. We show that 75% of the identified malware apps engage in search rank fraud. Fair Play discovers hundreds of fraudulent apps that currently evade Google Bouncer's detection technology. Fair Play also helped the discovery of more than 1,000 reviews, reported for 193 apps, that reveal a new type of "coercive" review campaign: users are harassed into writing positive reviews, and install and review other apps.

Keywords: fraudulent behavior, app market, Fair play, reviews.

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Data Protection Service for Securing Data in Cloud

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Abstract

Offering powerful data protection to cloud users while authorizing rich applications is a challenging task. We explore a new cloud platform architecture called Data Protection as a Service, which dramatically reduces the per-application development effort required to offer data protection, while still allowing rapid development and maintenance. Cloud computing promises lower costs, rapid scaling, easier maintenance, and services that are available anywhere, anytime. A key challenge in moving to the cloud is to ensure and build confidence that user data is handled securely in the cloud.

Keywords: Cloud authorizing, Cloud applications, storage, Cloud services.

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PAPER ID: ICRCSIT-0170

Soil Analysis for Crop Prediction and Water Low Using Iot and Ml

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Abstract

Soil moisture is a key variable in controlling the exchange of water and heat energy between the land surface and the atmosphere through evaporation and plant transpiration. Hence, it plays an important role in the development of weather patterns and the production of precipitation.Agriculture productivity mainly depends on quality of soil, which is dependent on factors like soil moisture and pH values.The main aim of this project is to determine different types of crops that can be grown in the soil. This is done by considering several parameters like PH value, Soil moisture, Humidity, Temperature. By this experiment, we conclude which type of crops can be harvested in that particular soil. Also, we will be pumping water automatically based on the soil moisture. Doing this, we could help farmers to pre estimate which land can be used for what purpose.

Keywords: IOT, ML, KNN, Naive Bayes, Crop Prediction.

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PAPER ID: ICRCSIT-0172

Analysis on User Interface & User Experience for Focussing on the Design, Role of Artificial Intelligence and Statistics

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Abstract

User interface (UI) & User experience (UX) seek to promote rich, engaging interactions between users and systems. UI design typically refers to graphical user interfaces but also includes others, such as voice-controlled ones. Over the years, good designers have always applied design thinking. The design industry has evolved a lot in the last few years leading us into the world of 6D. This analysis is based on the interaction between hardware and software. The goal of this interaction is to enhance the control of a machine from human end. We analyzed the evolution of UI&UX for focus on the Design, Artificial Intelligence Role and Statistics.

Keywords: User interface, User experience, Evolution, Design, Technology & Typography.

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DROPS: Division and Replication of Data in Cloud for Optimal Performance and Security

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Abstract

Outsourcing data to a third-party administrative control, as is done in cloud computing, gives rise to security concerns. The data compromise may occur due to attacks by other users and nodes within the cloud. Therefore, high security measures are required to protect data within the cloud. However, the employed security strategy must also take into account the optimization of the data retrieval time. In this paper, we propose Division and Replication of Data in the Cloud for Optimal Performance and Security (DROPS) that collectively approaches the security and performance issues. In the DROPS methodology, we divide a file into fragments, and replicate the fragmented data over the cloud nodes. Each of the nodes stores only a single fragment of a particular data file that ensures that even in case of a successful attack, no meaningful information is revealed to the attacker. Moreover, the nodes storing the fragments, are separated with certain distance by means of graph T-coloring to prohibit an attacker of guessing the locations of the fragments. Furthermore, the DROPS methodology does not rely on the traditional cryptographic techniques for the data security; thereby relieving the system of computationally expensive methodologies. We show that the probability to locate and compromise all of the nodes storing the fragments of a single file is extremely low. We also compare the performance of the DROPS methodology with ten other schemes. The higher level of security with slight performance overhead was observed.

Keywords: Centrality, cloud security, fragmentation, replication, performance.

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Dynamic Ordering Based on Web Page Importance and Individualize Search

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Abstract

This paper is centered around processing significance of a site page in a proficient manner. Page positioning is a basic factor in web search. Numerous modules and calculations have been proposed utilizing various assets with various suppositions. The calculations proposed incorporate Page Rank, Browse Rank, Browse Rank Plus, HITS and some more. A few different calculations have been proposed since, that centers just around a couple of specific components. This paper proposes positioning a page dependent on various elements that incorporates reachability, worth and client input. The significant point is to rank a site page dependent on these three urgent factors as opposed to considering a couple of variables considered by existing strategies. In this paper, we propose a proper system to figure page significance from client conduct information (which covers some past functions as unique cases). To begin with, we utilize a stochastic procedure to demonstrate the perusing practices of Web clients. As per the examination on a huge number of genuine records of client practices, we legitimize that the procedure is really a ceaseless time-homogeneous Markov procedure, and its fixed likelihood appropriation can be utilized as the proportion of page significance. Second, we propose various approaches to gauge parameters of the stochastic procedure from genuine information, which bring about a gathering of calculations for page significance calculation (all alluded to as Browse Rank). Our test results have indicated that the proposed calculations can beat the benchmark techniques, for example, PageRank and Trust Rank in a few errands, exhibiting the benefit of utilizing our proposed structure.

Keywords: page positioning, stochastic procedure, ceaseless.

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Statistical Applications of Confounding Techniques in Factorial Designs for Basic Science and Engineering

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Abstract

In Statistical Confounding Models Research Analysis we can able to understand the concept, importance and technique of confound of factorial experiments. Evaluation of 2^2 , 2^3 , 3^2 Frequency Distributions are more authentic in test Statistics. Determination of different confounding models through Testing of Hypothesis, Partial confounding, Total Confounding, Balanced partial confound will provided the importance of factorial designs in Basic Science and Engineering Curriculum. We can understand the confounding effects of factorial experiment. Partially obtained partial information regarding the effects confounded from the replicates in which the effects are confounded. Balanced partial confounding of an effect will influence the Test Statics in Confounding Designs. In Statistical Analysis of Confound ANOVA provides the technique to simplify the computation for Design of experiments. One-way Classification, Design of Experiments, and Testing of Hypothesis where it involves confounding effective ness and Treatments are plays a vital role in its application process.

Keywords: confounding, determination, factorial experiment, hypothesis, partial confounding, replicates.

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Cloud Side Authorisation for Preventing Resource Exhaustion Attack

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Abstract

Cloud storage has many benefits, such as always-online, pay-as-you-go, and cheap. Because of this, more data is outsourced to the public cloud for persistent storage, including personal and business documents. It provides a platform for software to host. Users cannot fully trust the cloud providers to host privacy-sensitive data, due to the absence of user-to-cloud controllability. To ensure confidentiality, data owners outsourced encrypted data instead of plaintexts. To share the encrypted files with other users, Ciphertext-Policy Attribute-based Encryption (CP-ABE) are often utilized to conduct fine-grained and owner-centric access control. But this doesn't sufficiently become secure against other attacks. Many previous schemes did not grant the cloud the capability to verify whether a downloader can decrypt. Therefore, these files should be available to everyone with access to cloud storage. A malicious attacker can download thousands of files to launch Economic Denial of Sustainability (EDoS) attacks, which can largely consume the cloud resource. The payer of the cloud service bears the expense. Besides, the cloud provider serves both because the accountant and therefore the payee of resource consumption fee, lacking the transparency to data owners. These concerns should be resolved in real-world public cloud storage. In this paper, we propose an answer to secure encrypted cloud storage from EDoS attacks and supply resource consumption accountability.

Keywords: Ciphertext Policy Attribute Based Encryption (CP-ABE), access control, authentication, public cloud storage, resource consumption, privacy-preserving.

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PAPER ID: ICRCSIT-0178

Analysis of Alzheimer Disease using Gene Expression as Biomarkers in Brain Regions

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Abstract

Alzheimer disease is a degenerative disease of the brain that causes dementia, which is a gradual loss of memory, judgment, and ability to function. This disorder usually appears in people older than age 65, but less common forms of the disease appear earlier in adulthood. Memory loss is the most common sign of Alzheimer disease. We proposed a computational method of detecting AD biomarkers by integrating gene expression data in six brain regions. The framework is based on differential co-expression network and machine learning. We identified module candidates and regarded Cluster as the identified AD biomarkers by using the Logistic regression classification algorithm for further screening.

Keywords: Alzheimer disease, dementia, memory loss, biomarkers.

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PAPER ID: ICRCSIT-0180

Abnormal Activities Detection using Convolutional Neural Network

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Abstract

Abnormal Activities Detection (AAD) is a widely studied computer vision problem. Applications of AAD include images like health care and human-computer interaction. As the imaging technique advances upgrades, novel approaches for AAD constantly emerge. Abnormal Activities Detection is a significant component of many innovative and human-behavior based systems. The ability to recognize various human activities enables the developing of intelligent control system. Usually the task of Abnormal Activities Detection is mapped to the classification task of images representing person's actions. This Paper addresses the problem of human activities' classification using deep learning methods such as Convolutional Neural Networks.

Keywords: Abnormal activity detection (AAD), Convolutional neural network, face recognition, deep learning.

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PAPER ID: ICRCSIT-0181

Web Scraping and Bar Chart Racing

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Abstract

From the evolution of WWW, the scenario of internet user and data exchange is quick changes. As common people join the internet and start to use it, lots of new techniques are promoted to boost up the network. At the same time, to enhance computers and network facility new technologies were introduces which results into automatically decreasing in cost of hardware and website's related costs. Due to all these changes, large number of users are joined and use the internet facilities. Daily use of internet cause into a tremendous data is available on internet. Business, academician, researchers all are share their advertisements, information on internet so that they can be connected to people quickly and easily. As a result of exchange, share and store data on internet, a new problem is arising that how to handle such data overload and how the user will get or access the best information in least efforts. Now a days, there are lots of software are available in the market for web scraping. Our paper is focused on the overview on the information extraction and data visualization on the time data series.

Keywords: Data Extraction, Data Cleaning, Data Visualization.

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PAPER ID: ICRCSIT-0182

Machine Learning Algorithm in Health Care Systems

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Abstract

Recent years Machine learning Techniques with their superior performance implements varieties of health care applications through Computer Aided Diagnosis with Multidimensional medical images and Databases. Machine learning is a system that learns from the data rather than algorithms. A mathematical model generated by training the system with the data to produce more precise outputs and predictive outcomes. This paper discusses the overview of the machine learning algorithms implemented in the Health care system and presents a potential method to work with Health Care applications.

Keywords: Machine learning, Computer Aided Diagnosis, Medical images.

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PAPER ID: ICRCSIT-0183

Credit Card Fraud Detection for Imbalanced Data using Sampling Techniques

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Abstract

Credit card fraud is a criminal offense. It causes severe damage to financial institutions and individuals. Therefore, the detection and prevention of fraudulent activities are critically important to financial institutions. Fraud detection and prevention are costly, time-consuming, and labor-intensive tasks. A number of significant research works have been dedicated to developing innovative solutions to detect different types of fraud.In our project, mainly focussed on credit card fraud detection for in real world. Initially I will collect the credit card datasets for trained dataset. Then will provide the user credit card queries for testing data set. After classification process of logistic regression algorithm using to the already analysing data set and user provide current dataset. Finally optimizing the accuracy of the result data. Then will apply the processing of some of the attributes provided can find affected fraud detection in viewing the graphical model visualization. The performance of the techniques is evaluated based on accuracy, sensitivity, and specificity, precision. The results indicate about the optimal accuracy for Decision tree are 96.6% respectively.

Keywords: criminal offense, fraud, datasets.

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PAPER ID: ICRCSIT-0184

Data Mining Based Spam Detection System for YouTube

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Abstract

People now feel more comfortable socializing over the internet through popular social networking and media websites than face to face. Thus, the social media websites are thriving more and more nowadays. Like others YouTube is a vastly popular social media site which is expanding at very fast pace. YouTube depends mostly on user created contents and sharing and spreading. Business entities and public figures are taking advantage of this popularity by creating their own page and shared information among the large number of visitors. However, due to this popularity, YouTube has become more susceptible to different types of unwanted and malicious spammer. Currently, YouTube does not have any way to handle its video spammers. It only considers mass comments or messages to be part of spamming. To increase the popularity of a video, malicious users post video response spam, where the video content is not related to the topic being discussed in the particular video or does not contain the media it is supposed to. In this research, we explore different attributes that could lead to video spammers. We first collect data of YouTube videos and manually classify them as either legitimate videos or spams. We then devise a number of attributes of videos which could potentially be used to detect spams. We apply Microsoft SQL Server Data Mining Tools (SSDT) to provide a heuristic for classifying an arbitrary video as either spam or legitimate. Our result demonstrates that in the long run we could successfully classify videos as spam or legitimate videos for most of the cases

Keywords: social network, spam detection, videos, rating, data mining.

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PAPER ID: ICRCSIT-0185

Privacy Preserving Biometric Identification Scheme in Cloud Computing

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Abstract

Biometric identification has become increasingly popular in recent years. With the development of cloud computing, database owners are motivated to outsource the large size of biometric data and identification tasks to the cloud to get rid of the expensive storage and computation costs, which, however, brings potential threats to users' privacy. In this paper, we propose an efficient and privacy-preserving biometric identification outsourcing scheme. Specifically, the biometric To execute a biometric identification, the database owner encrypts the query data and submits it to the cloud. The cloud performs identification operations over the encrypted database and returns the result to the database owner. A thorough security analysis indicates that the proposed scheme is secure even if attackers can forge identification requests and collude with the cloud. Compared with previous protocols, experimental results show that the proposed scheme achieves a better performance in both preparation and identification procedures.

Keywords: Introduction, Existing System , Literature Survey , Proposed System.

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PAPER ID: ICRCSIT-0186

Missing Child Identification System using Deep Learning and KNN

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Abstract

In India a countless number of children are reported missing every year. Among the missing child cases a large percentage of children remain untraced. This paper presents a novel use of deep learning methodology for identifying the reported missing child from the photos of multitude of children available, with the help of face recognition. The public can upload photographs of suspicious child into a common portal with landmarks and remarks. The photo will be automatically compared with the registered photos of the missing child from the repository. Classification of the input child image is performed and photo with best match will be selected from the database of missing children. For this, a deep learning model is trained to correctly identify the missing child from the missing child image database provided, using the facial image uploaded by the public. The Convolutional Neural Network (CNN), a highly effective deep learning technique for image based applications is adopted here for face recognition. Face descriptors are extracted from the images using a pre-trained CNN model VGG-Face deep architecture.

Keywords: Missing child identification, face recognition, deep learning, CNN, VGG-Face, KNN.

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PAPER ID: ICRCSIT-0187

Talking Gloves for Gesture Recognition using Flex Sensors

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Abstract

Today the main problem faced by the deaf and dumb people is the communication part, to convey their thought with other deaf and dumb people and with other normal people. Normal people can absorb new information and knowledge through the daily noises, conversations and language that is spoken around them. Deaf and hard-off hearing people do not have that luxury. This system will help those people by providing a medium to communicate. It is implemented using devices like flex sensors, and microcontroller. The past implementation of this project involved using image processing concept and accelerometer. But the drawback of these implementations are projects were non portable and too expensive. Therefore system is being proposed with the use of flex sensors and android technology. System includes two modules. First module is a hand glove with flex sensors and Atmel ATmega168 microprocessor to convert hand gestures to auditory speech. Second module is an Android App with Google Speech API to convert speech to readable text.

Keywords: Flex sensor, gloves, Embedded C.

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PAPER ID: ICRCSIT-0188

Intelligent Chat Bot for Banking System

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Abstract

An intelligent chat bot will be used to give information or answers to any question asked by user related to bank. Our Intelligent system will first take input from bank customer. This input will be taken as voice or written format. According to input, intelligent system will processes the query and give response to user. An artificial intelligence is most important and helpful part of our project. Intelligent system is automation of activities associated with human thinking, decision making, and problem solving process. This system will be available on web. Our system will represent the design and development of an intelligent chat bot. It will present a technology demonstrator to verify a proposed framework required to support such a bot (a web service). While a black box approach is used, by controlling the communication structure, to and from the web-service, the web-service allows all types of clients to communicate to the server from any platform. The service provided will be accessible through a generated interface which allows for seamless XML processing; whereby the extensibility improves the lifespan of such a service. By introducing an artificial brain, the web- based bot generates customized user responses, aligned to the desired character. Questions asked to the bot, which will not be understood, are further processed using a third-party expert system, and the response will be archived, improving the artificial brain capabilities for future generation of responses.

Keywords: ICB (Intelligent Chat Bot), AIML (Artificial Intelligent Markup Language), AI(Artificial Intelligent).

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PAPER ID: ICRCSIT-0189

A Decision Based Support System for Effective Crop Yield Prediction

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Abstract

Agriculture is the most important sector that influences the economy of India. To fulfil the needs of people, it is very important to have a good yield of crops. Factors like soil type, precipitation, seed quality, lack of technical facilities directly influences the crop yield. New technologies are necessary for satisfying the growing need and farmers must work smartly. Decision Support System methodology is used by the farmers to prevent the overheads of decisions about the soil and crop to be cultivated. The prediction system can be developed by using data mining techniques and by doing analysis on agriculture dataset. Different classifiers namely J48, Locally Weighted Learning (LWL), Logical Analysis of Data (LAD) Tree and Instance Based k nearest neighbor (IBK) can be used for prediction. Accuracy, Specificity, Sensitivity are the criteria of performance evaluation. The classifiers can be further compared with the values of Root Mean Squared Error, Mean Absolute Error and Relative Absolute Error. Lesser the value of error, more accurate the algorithm. The result is based on comparison driven from the classifiers.

Keywords: Data-mining, Classification, J48, Locally Weighted Learning, Logical Analysis of Data, Instance Based K neighbour.

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Alzheimer's Prediction using Dataset

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Abstract

A method for detection of Alzheimer's type dementia though analysis of vocalization features that can be easily extracted from spontaneous speech is presented. Unlike existing approaches, this method does not rely on transcriptions of the patient's speech. Tests of the proposed method on a data set of spontaneous speech recordings of Alzheimer's patients (n=214) and elderly controls (n=184) show that accuracy of 68% can be achieved with a Bayesian classifier operating on features extracted through simple algorithms for voice activity detection and speech rate tracking. Deep learning, a state-of-the-art machine learning approach, has shown outstanding performance over traditional machine learning in identifying intricate structures in complex high-dimensional data, especially in the domain of computer vision. The application of deep learning to early detection and automated classification of Alzheimer's disease (AD) has recently gained considerable attention, as rapid progress in neuroimaging techniques has generated large-scale multimodal neuroimaging data. These papers were reviewed, evaluated, and classified by algorithm and neuroimaging type, and the findings were summarized. Of 16 studies meeting full inclusion criteria, 4 used a combination of deep learning and traditional machine learning approaches, and 12 used only deep learning approaches. The combination of traditional machine learning for classification and stacked auto-encoder (SAE) for feature selection produced accuracies of up to 98.8% for AD classification and 83.7% for prediction of conversion from mild cognitive impairment (MCI), a prodromal stage of AD, to AD.

Keywords: ICB (Intelligent Chat Bot), AIML (Artificial Intelligent Markup Language), AI(Artificial Intelligent).

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Identification and Classification of Drone using KNN

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Abstract

Flying drones in safety zones is strictly prohibited. However, anti-social elements are likely to hit important targets in such zones, by using drones. The aim of this project is to continuously monitor safety zones using SAR images and raise an alarm as soon as a Drone is detected. This project contains three modules: DII (Drone Image Input) module is used to provide different drone images as input for the system. The DI (Drone Identification) module is used to monitor the images of the safety zone and to identify drones when they enter the safety zone. The 'alarm' module is used to send the message to the safety officers as soon a Drone is detected in the safety zone. This project uses the OpenCV algorithm to identify different types of drones and distance calculation algorithm to measure the distance of the Drone from the safety zone. The images of various types of drones are stored in an image file system. The file system will be stored at a specific location in directory structure. The location will be fed as input to the system. KNN classification is used to classify the drone as one of the drone types. The k-nearest neighbours algorithm (k-NN) is a non-parametric method used for classification. The input consists of the k closest training examples in the feature space. The output is a class membership. An object is classified by the class that is most common among its k nearest neighbors. The classification is based on the length, width, height and curvature of the drones.

Keywords: (OpenCV algorithm, k-NN)

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CT-Image Processing for Lung Cancer detection using Advanced Data Mining Techniques

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Abstract

This Lung cancer is the worst from all the cancers. There is approximately only 5 years endurance from the day of its diagnosis. One of the reasons why this cancer is so deadly is that it cannot be detected early as its symptoms take time to grow. Researchers are continuously working on the techniques to that can detect its early stages. This study emphasizes the detailed review of existing techniques in the literature of early detection of lung cancer. Comparison and analysis of different techniques in terms of preprocessing feature extraction and selection, classification models is represented. Meaningful insights are drawn from the comparative analysis along with limitations and advantages.

Keywords: Literature survey, lung cancer detection, segmentation, feature extraction, feature selection, classification.

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Virtual Health Assistence

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Abstract

Supervised machine learning algorithms have been a dominant method in the data mining field. Disease prediction using health data has recently shown a potential application area for these methods. This system aims to identify the key trends among different types of supervised machine learning algorithms, and their performance and usage for disease prediction.In medical imaging, Computer Aided Diagnosis (CAD) is a rapidly growing dynamic area of research. In recent years, significant attempts are made for the enhancement of computer aided diagnosis applications because errors in medical diagnostic systems can result in seriously misleading medical treat-ments. Machine learning is important in Computer Aided Diagnosis. After us-ing an easy equation, objects such as organs may not be indicated accurately. So, pattern recognition fundamentally involves learning from examples. In the field of bio-medical, pattern recognition and machine learning promise the improved accuracy of perception and diagnosis of disease. They also promote the objectivity of decision-making processes. For the analysis of high-dimensional and multimodal bio-medical data, machine learning offers a worthy approach for making classy and automatic algorithms. This survey paper provides the comparative analysis of different machine learning algorithms for diagnosis of different diseases such as heart disease, diabetes disease, liver disease, dengue disease and hepatitis disease. It brings attention towards the suite of machine learning algorithms and tools that are used for the analysis of diseases and decision-making processes accordingly.

Keywords: (Machine Learning, disease prediction, Machine Learning Techniques, NLP)

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Data Encryption with Deduplication on Cloud-Assisted E-Health Systems

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Abstract

The deduplication based on attribute-based encryption can be used in eHealth systems to save storage space and share medical records securely. Here in this paper, we propose attribute-based encryption scheme that allows efficient deduplication and attributes revocation for eHealth system. Particularly, an efficient deduplication protocol based on nature of prime number is been used to alleviate the burden of computation on the private cloud, and attribute revocation is done by updating the attribute agent keys and the cipher text. Besides this, externalizing decryption is introduced to reduce the computation overhead of clients. The security analysis says that proposed scheme will reach the desired security requirements for the eHealth system, and the visual experiment result showed the excellent performance of the proposed scheme while performing good deduplication.

Keywords: (Secure deduplication, attribute-based encryption, attribute revocation, eHealth systems)

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PAPER ID: ICRSCIT-0197

Uber Data Analysis using MapReduce

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Abstract

Map Reduce is a structured framework where we can run applications to process large amounts of data, in parallel, on large clusters of commodity hardware in a reliable manner. It is also a processing technique and a program model for distributed computing based on java. The Map Reduce algorithm contains two components, namely Map and Reduce. To accomplish this, Uber relies heavily on making data-driven decisions at every level, from forecasting rider demand during high traffic events to identifying and addressing bottlenecks in our driver-partner sign-up process. We are using Uber Data for analyzing the vehicle with most popular trips. As mapreduce is used to process huge amounts of data, we are using mapreducing model to analyze uber data and give insights about the most used vehicle, number of trips it has covered. The main purpose of this project is to know how Uber stores and analyses data on every single trip the users take which is leveraged to predict the demand for cars, set the fares and allocate sufficient resources.

Keywords: (Map Reduce, algorithm, distributed computing)

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Resource Provision and Job Scheduling in Single Node and Multi Node Cluster

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Abstract

Situation of Current days is in exponential growth of the data. When data is mounting up in large magnitude and increasing in size then analyzing data is extremely significant. This paper regards diverse possessions such as Processing frameworks in hadoop, Job Scheduling, the map reduce phase, building a cluster , running jobs on single node cluster and multimode cluster and how to schedule the jobs on queue.

Keywords: (Hadoop, Bigdata, Job scheduling, Map Reduce)

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Cotton Leaf Spot Disease Detection using Multi-Class SVM

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Abstract

Agriculture is the most vital sector within the Indian Economy. Nearly70% of rural households still rely totally on agriculture for his or her support. Cotton is taken into account one amongst the foremost necessary money crops, as most of the farmers cultivate cotton in giant numbers. Over the past decades the diseases on cotton increase giant numbers that result in tremendous loss of yield and productivity. Identification of cotton diseases at associate degree early stage is vital. This paper detective works the diseases on cotton by analyzing the cotton leaf spots and classify the diseases on cotton ar plant, bacterial, infective agent diseases. whether or not the cotton leaf is healthy or unhealthy. The analysis of the assorted diseases gift on the cotton leaves will be effectively detected within the early stage before it'll harm the entire plant.

Keywords: (Multi-class SVM, Image processing, support vector machine, cotton leaf, disease, detection)

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PAPER ID: ICRSCIT-0200

Shape Based Image Retrieval using Structural and Global Descriptors

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Abstract

Content-based Image Retrieval (CBIR) systems often rely on the basic features of an image such as color, texture, shape and other features to search and retrieve similar images from a database. Among these features, shape plays an important role as objects are mainly perceived by their shape. In this paper, we have proposed shape based image retrieval using structural and global shape descriptors. The structural shape descriptors are based on the radial distance ratio. A novel edge pixel sampling method is proposed for uniform sampling of edge pixels to be used by a global descriptor based on distance interior ratio. Shape descriptor matching is done using bin-to-bin matching and Most Similar Highest Priority matching algorithms. MPEG-7 shape dataset is used to conduct the experiments. The experimental results show that the proposed method is effective and efficient for image matching and retrieval with a Bull's-eye score of 80.275%. The proposed method is simple and computationally effective which makes it suitable for practical applications with large databases.

Keywords: (CBIR, radial distance ratio, MPEG-7)

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Image and Text Processing Method for Article Annotation

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Abstract

In advance days errands in language getting ready like image subtitling and programmed photo restoration had been in no way positioned methodologies. The language preparing challenge is depending upon huge variety of making ready informational collections of photographs are linked with human explanations that explicitly portray the visible substance. Here we have clarified about progressively complex times of language making geared up have been literary portrayals are inexactly diagnosed with a photographs. We were focused on excellent areas of articles in which the printed data are often communicated with close connection with that aren't straightforwardly derived via a pix .We have furnished about a models and structures for severa undertakings along with article remark, supply place, content comment, inscription age and image recuperation. We reveal this on the point of is appropriate to investigate previous troubles, for which we can offer benchmark execution utilizing special studying models and distinctive portrayal of the literary and seen highlights. We stock absolutely apparent results and beat a few constraints of current methodologies of this sort of vicinity, which we believe it will help with developing greater development in this field.

Keywords: photograph inscribing; supply recognition; inscription age; image restoration; visible and published highlights.

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A Method for Forecasting Heart Disease using Effective Machine Learning Process

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Abstract

With massive statistics improvement in biomedical and human services networks, authentic exam of medical information blessings early coronary heart contamination reputation, chronic attention, and network administrations. Anyways, the examination exactness is decreased even as the individual of medical records is fragmented. Further, various districts show notable attributes of wonderful provincial diseases, which may additionally debilitate the expectancy of contamination flare-ups. On this paper, we clean out AI calculations for a hit forecast of coronary heart infection flare-up in sickness go to networks. We explore the altered forecast models over proper clinical clinic data accumulated from numerous portions of province. To beat the trouble of insufficient data, we utilize an inactive problem version to reproduce the missing facts. We look into a heart disorder dependent on the element consequences given by the use of the patron. It predicts the usage of AI calculations. As a consequence, the yield is precise. It makes use of flagon internet define paintings for GUI. On this we can destroy down data the use of ML calculations..

Keywords: AI, Machine Learning

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Content Based Image Indexing and Retrieval in Multimodal Systems

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Abstract

Recent years have seen a surge in data over the internet as well as on personal computers. With the increase in data the need of the user has changed to on time accurate information. This has restricted the use of single modality in information access and retrieval systems. Hence more advanced systems are needed that can utilize various modalities in information retrieval systems. In these systems the content base image retrieval and the questioning is the need of the hour to get visual data. The Content Based Image Retrieval (CBIR) is broadly utilized in developing and inquiring about the range of computerized image handling. The CBIR based framework broadly utilized for extracting the visual properties of a image such as color, surface or any other combination of chosen modalities such as line and shape. Already, the images are physically marked with assistance of keywords and recovery is done using text based search strategies. Within the proposed method paper gives an interesting procedure for substances based image recovery utilizing outline in multimodal systems. In this proposed framework CEDD (Color and Edge Directivity Descriptor) employs EHD (Edge Histogram Descriptor) in a way to improve the execution of edge discovery based strategy and makes it more productive for way better execution of the total framework. The strategy indicates the conceivable solution to use descriptors of data which can handle data and information gap between the sketch and the colored images and results in an efficient search for the user in Multimodal Systems.

Keywords: (Modality; Multimodal Systems; CBIR; Sketch Based Approach; Indexing; Retrieval)

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PAPER ID: ICRSCIT-0205

Comparative Analysis on Cotton Wool Spots Detection

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Abstract

A thin tissue layer placed at the back of the eye that converts light into nerve signals is known as retina, and then send that nerve signals back to the brain for interpretation. It is an innermost and very important layer of the eye, Cotton wool spots are small, yellowish-white or grayish-white slightly elevated lesion which looks like clouds and their edges are blurry and not clearly defined. On the other hand, hard exudates are small white or yellowish white deposits with sharp margins. In this proposed paper we compare the performance of several CWS Detection Methods being purposed by different researchers. There are many types of database available such as DRIVE, DIARETDB0, DIARETDB1 and so on. Many researchers use these databases to evaluate their devolved techniques

Keywords: (CWS Detection, DRIVE, DIARETDB0, DIARETDB1)

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PAPER ID: ICRSCIT-0207

New Trends in Big Data Analytics and Its Advanced Technologies

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Abstract

Big data has become a vital part of our computing technologies in recent times. However, in many literatures, the concept of big data had focused mainly on identifying its definitive features without concrete applications to solving the several challenges it presents. Though a number of tools and technologies exist to solve problems in the big data domain, many problems remain unsolved due to less understanding of the applied features of these tools. This paper defines five research questions in this new area, examined through a review of the state-of-the-art approaches in big data analytics. The review includes major fields in which big data analytics readily find application, tools and technologies employed for big data solutions, trends in big data analytics as well as application areas. The paper concludes with highlighting the current and emerging research issues in the bigdata domain and identify next directions in future works.

Keywords: Big data, Big data analytics, NoSQL, Hadoop, MapReduce, Hadoop Ecosystem, Apache Spark

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An Experiment on Covid-19 Face Mask Identification Using Various Machine Learning Classification Algorithms

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Abstract

Nowadays, Machine Learning is implemented everywhere to analyze, predict, and visualize various real-time problems. Even in this tough COVID-19 pandemic, ML can play a challenging role in containing this novel coronavirus. Until today, there is no proper cure to minimize this pandemic. The chances of the transmission get nullified if there is frequent usage of masks by people before they step out. In this paper, firstly we analyze the real-time problem of Face-Mask identification by implementing Machine Learning classification algorithms like Logistic Regression, K- Nearest Neighbors (KNN), Random Forest (RF), and Support Vector Machines (SVM). Secondly, we boosted the precisions of each classification model by using AdaBoost. After applying AdaBoost we compared the performance of the various models and significantly observed that Logistic Regression has performed efficiently, proved it has a scope as a best model to tackle this pandemic problem.

Keywords: (COVID-19, Machine Learning, Classification Algorithms, Face-Mask identification & AdaBoost)

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PAPER ID: ICRSCIT-0210

Improving Software Economics of Different Organisations using Scrum Methodology in Life Cycle Phases of Iterative Project Development in Software Project Management

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Abstract

Most organizations that depend on software are struggling to transform their lifecycle model from a "development" focus to a "delivery" focus. This subtle distinction in wording represents a dramatic change in the principles that are driving the management philosophy and the governance models. Namely, a software development orientation focuses on the various activities required in the development process, while a software delivery orientation focuses on the results of that process. Organizations that have successfully made this transition -- perhaps 30-40% by our estimate -- have recognized that engineering discipline is trumped by economics discipline in most software-intensive endeavors

Keywords: (Scrum methodology, software project management)

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PAPER ID: ICRSCIT-0212

A Compression Technique Through Data Mining on Frequent Pattern Growth Rule

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ABSTRACT

Now a days, planning differentially non-public data processing rule shows a lot of interest as a result of item mining is most facing drawback in data processing. Throughout this study the likelihood of planning a non-public Frequent Itemset Mining rule obtains high degree of privacy, knowledge utility and time potency to realize privacy, utility and potency Frequent Itemset Mining rule is planned that relies on the Frequent Pattern growth rule. Non-public Frequent Pattern -growth rule is split into 2 sections particularly preprocessing section and Mining phase. The preprocessing section consists to enhance utility, privacy and novel good rending methodology to remodel the database; the preprocessing section is performed just one occasion. The mining section consists to offset the data lost throughout the group action rending and calculates a run time estimation methodology to search out the particular support of itemset in a very given info. Any dynamic reduction methodology is employed dynamically to cut back the noise additional to ensure privacy throughout the mining method of associate degree itemset.

Key words **-** Itemset, Frequent Itemset Mining, data processing, differential privacy.

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PAPER ID: ICRSCIT-0213

Authentic Data Distribution Services in Cloud Computing

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Abstract

The cloud computing technologies have been rapidly risking in recent years due to its ready expansion, high reliability, low cost and other advantages. Therefore, in combination with the advantages of cloud computing in terms of technology and cost, the research on cloud-computing-assisted reliable data distribution technologies is a practical and challengeable topic. We will present a scenario for increasing the availability of services in cloud. We will mainly focus on classification of data with ensured security and making them available to the nearest data centers. This study aims on increasing the availability of services in cloud according to the classification and replication strategies that have been defined. the in-depth analysis on the characteristics of reliable data distribution and cloud computing and their relations, the innovative proposing of a model of forwarding structure of cloud-computing-assisted reliable data distribution, the research on the cloud-computing assisted data recovery and error control theory on the basis of aforementioned model together led to the introduction of a set of readily deployable, cloud-computer- assisted, and reliable data distribution service system.

Keywords: (Reliable Data Distribution, Cloud Computing.)

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PAPER ID: ICRSCIT-0215

Classification of Medical Kidney Ultrasound Image DMKL and LDA Using Weiner Filter

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Abstract

Ultrasound imaging techniques is considered to be safest technique and it plays a crucial role. Ultrasound images are prone to speckle noise and other limitations, so it is a challenging task to establish a suitable classification technique. This paper proposed innovative method of classification of ultrasound images of kidney as bacterial infection, cystic and polycystic images. For this research paper the kidney image data base used to find the region of interest (ROI) of kidney. The preprocessing is carried out by using Weiner filter to remove speckle noise. The despeckled images are used for extraction of various features that provide tissue characteristics of kidney region in ultrasound images after performing segmentation by Markov random field. Two classifiers have been incorporated with LBP features identified to classify the kidney ultrasound image as bacterial infection, cystic and polycystic image. This paper has the novel vision of implementing a computer-aided diagnosis system for kidney images. The overall detection rate of detected kidney diseases using DMKL classifier is 89%.

Keywords: (Kidney Ultrasound Imaging, Weiner Filter, LBP, LDA, DMKL)

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PAPER ID: ICRSCIT-0216

Recognisation of Diabetic Retinopathy Using Transfer Learning

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Abstract

Diabetic retinopathy (DR) is a kind of eyes disease caused by diabetes. With the development of science and technology, vision plays an increasingly important role in people's daily life. Therefore, how to automatically classify diabetic retinopathy images has significant value. The traditional manual classification method requires knowledge and time and it's difficult to obtain an objective and unified medical diagnosis. Therefore, this paper proposes a method for diabetic retinopathy recognition based on transfer learning. First, download data from Kaggle's official website, then perform data enhancement, include data amplification, flipping, folding, and contrast adjustment. Then, use pretrained model such asVGG19, InceptionV3, Resnet50 and so on. Each neural network has been trained by ImageNet dataset already. What we need to do is migrate the DR images to these models. Finally, the images are divided into 5 types by the serious degree of diabetic retinopathy. The experimental results shows that the classification accuracy of this method can reach at 0.60, which is better than the traditional direct training method and has better robustness and generalization.

Keywords: (diabetic retinopathy; neural network; transfer learning)

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PAPER ID: ICRSCIT-0218

Fire Detection through Python using Haar Cascade Files and Open CV

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Abstract

Tactile Internet can combine multiple technologies by enabling intelligence via mobile edge computing and data transmission over a 5G network. Recently, several convolutional neural networks (CNN) based methods via edge intelligence are utilized for fire detection in certain environments with reasonable accuracy and running time. However, these methods fail to detect fire in an uncertain IoT environment having smoke, fog, and snow. Furthermore, achieving good accuracy with reduced running time and model size is challenging for resource constrained devices. Therefore, in this paper, we propose an efficient CNN based system for fire detection in videos captured in uncertain surveillance scenarios. Our approach uses light-weight deep neural networks with no dense fully connected layers, making it computationally inexpensive. Experiments are conducted on benchmark fire datasets and the results reveal the better performance of our approach compared to state-of-the-art. Considering the accuracy, false alarms, size, and running time of our system, we believe that it is a suitable candidate for fire detection in an uncertain IoT environment for mobile and embedded vision applications during surveillance

Keywords: CNN, Fog, IoT and surveillance

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A Study of Agile Approach in Food Industry for Minimal Product Risks

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Abstract

Item development is one of the most hazard exercises in business. Advancement purposed at conveying problematic effect, or making new market spaces or step-changes in item, procedure or plan of action execution. The core of the Agile technique in item advancement is the utilization of a progression of quick, iterative learning circles, and become a coordinated viewpoint in entire angles in worked to advancement development and make new wellspring of significant worth. This examination reason to actualize the lithe way technique in food item development and how this methodology can limit dangers which happen during problematic condition. To arrive at the point of this exploration, three significant stages were directed in lemongrass tea as practical food industry which were (1) Identify and investigate hazard factor dependent on its intricacy and adaptiveness, (2) Build the SWOT structure dependent on chance recognizable proof, and (3) Choose and break down the best nimble methodology from SWOT Strategies. As the outcome, WT (shortcoming danger) procedure has been picked dependent on hazard observation and become the key factor for the advancement of lemongrass tea to arrive at worldwide market.

Keywords: Agile, hazard, SWOT, Food Industry

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An Ensemble Method to Diagnosis the Diabetics in India using Data Mining

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Abstract

The information disclosure from clinical datasets is amazingly huge to make a successful clinical conclusion. The objective of the Data Mining is to gain information from a dataset and adjust it into a fitting structure for additional utilization. Diabetic Mellitus remains as a broadly rising incessant infection, and this is an incredible test around the world [1]. Today, it is basic in different age bunches extent as of youngsters to grown-ups. As the quantity of Diabetic Mellitus persistent have been multiplying each year explicitly in India In the proposed work, comparative study on various classification algorithm such as Naïve Bayes, Random Forest, Decision tree, K Nearest Neighbor (KNN) , Support Vector Machine(SVM) on dataset to predict whether the given person affected with diabetic or not. In this work, a new ensemble method is identified to provide better accuracy such as 85.44 % compared with existing classification algorithm.

Keywords: (Data Mining, KNN, SVM)

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PAPER ID: ICRCSIT-0222

Secure ATM Banking System for Efficient Operations

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Abstract

In banking system, different branches are present and these are connected to the main branch. So, the same bank is located at different locations for providing the same type of banking services. The manual method of managing these banks from one location is difficult, but it can be easily done with an ATM software application like this.The overall banking procedure has become much easier, comfortable and secured as well with ATM (Automated Teller Machine). ATM has saved customers time for withdrawing balance, checking recent transactions and checking bank balance from any location

Keywords: ATM, Banking System and customer

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The Ransomware Identification and Behavioral-Based Classification using Machine Learning

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Abstract

Ransomware is a form of malevolent software that has straight access to computer, mobile device and etc. Attacker use the polymorphic technique to avoid the malware detection. Though there is lot of technological advancement with respect to security, there exists malware attacks. In this paper we use machine learning techniques for two main parts that is to detect the ransomware and classify the ransomware variants. The data sample which contain some of the current malware samples which are obtainable in a Kaggle website. In this study we have used supervised machine learning (ML) classifiers such as Random Forest for feature selection, whereas for classification of ransomware based on their behavior we use K-Nearest Neighbor (K-NN), Random Forest and Decision Tree Algorithms. Therefore result, we evaluate the classification with the Random Forest as maximum accuracy 99.43% when compared with other two algorithms.

Keywords: K-NN, Machine Learning and Malware attacks.

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An Improvemental Research on Networking

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Abstract

This paper presents an overview of networking and wireless networking with emphasis on the most popular standards: Bluetooth, Wi-Fi, WiMAX, and Cellular Networks. An overview of the advantages that wireless networks have over wired technology.The paper also advances some of the major security risks that wireless networks face. Various strategies that can be employed to mitigate these risks and safeguard the privacy and security of the network are given.A review of how wireles networks can be used in education and training is given education field has benefited from the growth of wireless technology and the cost effectiveness of technology.

Keywords: Networking, classification of computer networking, wireless networking.

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Learning to Live with Machine Learning - The Technological Wave

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Abstract

Machine Learning or ML has been around for a long time but people are still unsure about how to react to it. This paper gives insight into what ML is and why we shouldn't fear it. Here, we also list the present and future applications of Machine learning. We can confidently say that ML is going to lead us to a bright future.

Keywords: Machine Learning, and future application.

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A Comparative Analysis of Reviewed Crypto - Steganographic Approaches

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Abstract

Digital communication has seen continuous evolution and rapid increments in many applications over the network. Information exchange over the global network can be secret and highly sensitive. Therefore, information security must be provided over such insecure networks. Information security plays a key factor role in network performance metrics. Cryptography and steganography are useful techniques to give protection to the sensitive information or data transfer over mediums like the internet from intruders. Cryptography and steganography deal with hiding the content meaning of message and content existence of a message respectively. However, individuals do not completely achieve the security requirements such as robustness, imperceptibility and security. So, a new security concept using a combination of cryptography and steganography generated for achieving the next height of information or data security. In this paper, we have described the basic concept of cryptography and steganography and also performed comparative study of them. Moreover, we have made comparative analysis of blended cryptography and steganography approaches of literature survey using parameters such as encryption algorithm, steganography algorithm, types of secret data and cover media used.

Keywords **-** Encryption; Decryption; Cryptography; Stego object; Steganography

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Identification of Covid-19 Infected People Using Machine Learning with Tensorflow Backend

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Abstract

Identification of COVID-19 infected people using machine learning with TensorFlow backend is an idea proposed to eliminate the ambiguity in testing the people against COVID-19 disease. Lack of testing the covid-19 cases in the country may leads to dig our own grave. Reading such news, where testing goes wrong with the infected person and they regret when the whole community or the people in contact with the person gets affected with COVID-19, gave a way for me to propose this idea. This model will help in making the people strong, bold and not be frightened that everything like dry cough or flu is due to COVID-19. The experimental result performed shows an accuracy of 99% in all the cases considered. This model will bring a significant change in the society as it an effective, user friendly way to collect information and process it. My work is purely a new idea which helps the society to fight against this pandemic situation without ambiguity in knowing the presence of covid-19.

Keywords **-** COVID-19, Artificial Neural Networks, Machine learning, TensorFlow & Pandemic.

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Digital Impact on Education and Learning

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Abstract

This paper expresses personal views and documental study about the impact of covid-19 on Higher Education . During this pandemic we all are forced to move towards the era where things have to be done through digital medium. Although every essential of life cannot be achieved through digitalization but it does ease the pain of what we go through in our daily life. Same in the field of education it came up as a strongest support in our life but still we have to analyze the ups and downs of this solution, is it good or not, is it sufficient or can it replace the traditional methods?

Keywords - Higher Education, Covid19, Education incovid, Education in pandemic, Digital Education.

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Intelligent Ranking Service in Federated Cloud Environment using Big Data Streaming with Spark

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Abstract

Combined Cloud Architecture is a heterogeneous and appropriated show that gives frameworks identified with the cloud by totaling distinctive Infrastructure-as-a-Service (IaaS) suppliers. For this situation, it is an energizing errand to choose the ideal administration cloud supplier for the client and after that convey it. In this system, another supplier disclosure calculation and fluffy sets positioning model is proposed in the adjusted united engineering and afterward the execution is assessed. The proposed disclosure technique waitlists the supplier in view of the Quality of Service (QoS) markers recommended by the Service Measurement Index (SMI) with the Service Level Agreement (SLA) that gives enhanced execution. Determinant the most effective cloud computing service for a particular application may be a significant issue for users. Big data Streaming method is an optimization algorithm based on obligate brood parasitism of some cuckoo species by laying their eggs in the nests of other host birds. There are several nests in cuckoo search. Each one egg specifies a result and an egg of cuckoo specify a fresh result. The original and enhanced clarification is reserve the majority horrible clarification in the nest. The subsequent depiction format is preferred by Cuckoo Search algorithm: each one egg in a nest signifies a clarification, and a Cuckoo egg signifies an original clarification. The intent is to employ the original and perhaps enhanced egg to substitute a not so fine egg of cuckoo in the nests. Nevertheless this is the fundamental situation i.e., one cuckoo for each nest, but the scope of the system can be augmented by integrating the possessions that each one nest can encompass more than one egg which signify a group of clarification using spark.

Keywords: Federated Cloud, Cuckoo search, Rankng Model, Bee Search, Nest Techniques

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Greedy Algorithms for Sparse and Redundant Representations of Images

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Abstract

Obtaining an efficient representation of an image that provides accurate characterization of its features by linear representation methods is gaining significant attention. The sparse and redundant representations are one such powerful representations which code a large amount of the image information with only a few image samples. The sparse coding problem has two approaches namely solutions using greedy algorithms and solutions by solving convex relaxation of the problem. This paper presents an overview of significant greedy solution methods.

Keywords: Greedy algorithms Sparse and Redundant images.

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Evolution of Neural Turing Networks Model for Advanced Prediction of Flood Disaster Management

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Abstract

The Evolution of Neural Turing Machines plays a major role in the Flood disaster PredictionResearch. We expand the capacities of neural systems by coupling them to outside memory assets, which they can associate with by attentional procedures. The joined framework is similar to a Turing Machine or Von Neumann engineering yet is differentiable end-to-end, permitting it to be proficient prepared with inclination plummet. Starter results show that Neural Turing Machines can construe basic calculations, for example, replicating, arranging, what's more, acquainted review from info and yield models.one of the significant goals of Artificial Intelligence is to configuration learning calculations that are executed on a general purposes computational machines, for example, human cerebrum. Neural Turing Machine (NTM) is a stage towards acknowledging such a computational machine. The endeavor is made here to run a deliberate audit on Neural Turing Machines. To start with, the brain guide and scientific classification of AI, neural systems, and Turing machine are presented. Next, NTM is assessed as far as ideas, structure, assortment of forms, executed errands, correlations, and so forth. At long last, the paper talks about issues also, winds up with a few future works.

Keywords: NTM, Assortment and Neural Turing Machine.

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Horizontal Partitioning Based Approach of Clustering Proposed for Browsing Behaviour Data

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Abstract

This work aims in exploring the types of web browsing behaviour of surfers using unsupervised approach. The dataset is collected using an online newspaper. A simple and a weighted k-modes algorithm have been applied to the dataset. Due to the characteristics of the dataset, the algorithm could not generate reliable result. Hence, a modification has been introduced to the used algorithm, to make them suitable to the dataset. The modified approach not only increased the purity of clusters but it could generate the actual number of clusters, independent of the number of initial modes given to it. Although the dataset was collected for 4 types of behaviours, our approach shows that there are 6 types of behaviour, at 5% threshold of cluster size to total dataset size. Also the clusters reveal that page-view-duration, number-of –times-of –visit-to-start-page and number-of-news-categories-visited play important role to predict the type of browsing behavior of a surfer. Further, Classification Rule Mining is applied on the original as well as clustered data to find the effect of cluster-classisfication rule mining and get an insight into the utility of the results.

Keywords: Unsupervised approach, Reveal and clustering.

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The Lean Six Sigma Practices in Software Development Organization using Interpretive Structural Modelling Approach

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Abstract

The important functions of lean in software development practices has enhanced with a maximum competition in global software worldwide business. A software customer would like to purchase a software product at the minimum possible cost without compromising software reliability and software quality. To defeat this serious problem, the function of lean in software development practices has been used. Lean Six Sigma is ability to do something for waste reducing without any compromising in software reliability, software productivity, and software quality. For achieving this intention, thirteen software practices of lean in software development practices have been selected through literature survey, six sigma Champions advice, from academicians, and organizational experts. To select the annoyed impact of lean in software development practices, the framework modelling approach have been used to discover interrelation between these lean six sigma software development process practices utilised. By using "cross-impact matrix product applied to classification" is applied for several areas with interpretation self structure modelling. Output of this examinations are highest profitable towards the execution in software organizations getting lean six sigma methodology.

Keywords: Interpretive Structural Modelling Approach, Lean Six Sigma, Software practices and process, Software Industry

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Heightening of Battery Duration in Mobile Computing

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Abstract

Distributed computing can make accessible vitality investment funds as an assistance towards versatile clients, in spite of the fact that it additionally represents various special difficulties. Cell phones are getting progressively mainstream and a large portion of these gadgets are prepared by methods for cameras and incorporate a few gigabytes of blaze stockpiling capable of putting away a huge number of pictures. With such colossal picture assortments, two functionalities end up being significant, for example, getting to explicit arrangements of pictures from assortment, just as transmitting pictures on a remote framework towards different gadgets and servers on the side of capacity. Different investigations have perceived longer battery presence as the major required component of such frameworks. Instead of specialist co-ops supervising programs running on servers, virtualization licenses cloud sellers to run clueless applications from changed clients on virtual machines. Cloud merchants subsequently make accessible registering cycles, and clients can use these cycles to diminish the measures of turning out to be on portable frameworks and collect vitality therefore, distributed computing can amass vitality on the side of versatile clients through calculation offloading. Remote transmission vitality is principally critical hold-up to vitality reserve funds in distributed computing of mobiles, and such methods will end up being increasingly more significant as it end up being progressively acknowledged. Offloading is useful when colossal measures of calculation are fundamental with similarly limited quantities of correspondence.

Keywords: offloading, clueless applications and distributed computing.

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Crop Prediction using Simulator by Comparing Different Machine Learning Algorithms

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Abstract

Machine learning techniques are very important in Agricultural Sector. The main aim of this study is to compare the various algorithms in machine learning like Logistic Regression (LR), Decision Tree (DT), Random Forest (RF), Gradient Boost Tree (GBT) and Support Vector Machine (SVM). All these algorithms applied on crop dataset that contain temperature, PH value, different crop types, moisture and humidity of soil. Using these algorithms performance of dataset is tested in terms of high accuracy, calculation of error rate of model. Also in this study we have created simulators for prediction of crop depending on the different attributes from dataset. After analysis of all algorithms, finally Logistic Regression (LR) is found more accurate compared to all other to give better predictions & recommendations of profitable crops to the farmers.

Keywords: Machine Learning, Random Forest and Gradient Boost Tree.

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A Primer on Data Mining in Perspective of Healthcare Sector

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Abstract

Health care organizations collect and store huge amounts of information regularly. Healthcare is a knowledge-rich industry and data mining is becoming a necessity. Data mining algorithm(s) helps in automating data extraction which helps to gain interesting knowledge. Simply stated, eliminating manual processes and allowing data directly to be collected from Electronic health records will save lives and minimize health care costs, and also early detection of chronic diseases through an automated assortment of data. Information mining can allow healthcare groups to guess patterns in patient outcomes and activities that are accomplished through various viewpoints by data analysis and seemingly unrelated knowledge finding associations and relationships. Unprocessed data through healthcare organizations is huge and mixed. These must be stored and managed in the structured format and their combination allows for the development of a healthcare information system. Healthcare data mining offers infinite opportunities for identifying unknown trends from these data sets. Clinicians in the healthcare sector may use such patterns to assess patient symptoms, prognoses, and treatments. This paper gives an overview of how data mining can help in healthcare.

Keywords: Data Mining, Healthcare, Data Mining Techniques, Disease.

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A Survey of Multimodal Biometrics System

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Abstract

Biometrics recognition technologies are being developed to verify or identify individuals on the basis of measurement of face, hand geometry, iris, retina, finger, ear, voice, signature, DNA and even body order. Multimodal Biometric recognition systems should provide a secure and reliable personal recognition schemes to either confirm or determine the identity of an individual. The application of multimodal biometrics in current fields like computer systems security, secure electronic banking, mobile phones, credit cards, secure access to buildings, Evoting, health and social services. Various techniques used in different level of fusion with the objective of improving performance & robustness at each level of fusion. This paper discussed the multimodal biometrics system with its applications, different levels of fusion and methods of fusion. This paper will help to security researchers some useful insight whilst designing better multimodal biometric systems.

Keywords– Biometrics, Multimodal biometrics, Recognition, Verification, Identification, Fusion, Methods, Applications.

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A More Efficient and Secure Communication using Elliptic Curve Cryptography

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Abstract

Communication security is the most important aspect of the today's digital world. For securing the communication many cryptographic techniques have been evolved. They are generally categorised as the symmetric key cryptography and asymmetric key cryptography (public key cryptography). Public key cryptography was first introduced by Diffie & Hellman in 1976. Particularly the security in that algorithm was dependant on the security of the discrete log problem. The idea of discrete logarithmic problem in asymmetric cryptography is popular since then. This idea of discrete log problem can be extended to the elliptic curves. The use of Elliptic Curve in cryptography was first proposed by Miller and Koblitz in 1985. In this paper we are elaborating the elliptic curve cryptography, we are also going to elaborate the mathematics behind the elliptic curve, How the elliptic curves can be used for the data encryption efficiently, how it can be used for Exchanging the secure keys between the two communicating parties and how the elliptic curves can be used for digital signature generation and verification. Finally we will compare ECC with the other encryption techniques

Keywords: ECC, Cryptography and encryption techniques

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PAPER ID: ICRCSIT-0247

Diagnosis of Alzheimer's Disease Dementia Using Machine Learning

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Abstract

Alzheimer's is a sort of dementia that causes issues with memory, thinking and conduct. Manifestations as a rule grow gradually and deteriorate after some time, getting sufficiently serious to meddle with everyday tasks. Alzheimer's is certifiably not a typical piece of aging. The most prominent realized hazard factor is expanding age, and most of individuals with Alzheimer's are 65 and more established. Be that as it may, Alzheimer's isn't only an ailment of mature age. Roughly 2,00,000 Americans younger than 65 have more youthful beginning Alzheimer's malady (otherwise called beginning stage Alzheimer's). Alzheimer's is the 6th driving reason for death in the United States. Those with Alzheimer's live a normal of eight years after their manifestations become perceptible others, to other people, however endurance can go from four to 20 years, contingent upon age and other wellbeing conditions. Alzheimer's has no momentum fix, yet medications for indications are accessible and look into proceeds. Albeit current Alzheimer's medicines can't prevent Alzheimer's from advancing, they can briefly slow the compounding of dementia side effects and improve personal satisfaction for those with Alzheimer's and their parental figures. Today, there is an overall exertion under approach to discover better approaches to treat the ailment, defer its beginning, and keep it from developing. It brought about by physical difficulties the brain. Further, proposed having CT, MRI, PET, EEG techniques. Machine learning to be widely used in medical field.

Keywords: SVM, Random forest algorithm, Alzheimer's disease symptoms.

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Score Level Fusion of two CNN using Co-Occurrence CBoW and Skip Gram Word Embedding models for Sentiment Analysis

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Abstract

Sentiment classification or opinion mining is an important domain research in Machine Learning and Text Mining. The research in this domain is having direct impact on the societal business, which is very much essential in today's technological life. In this article, we present the score level fusion of two convolutional neural network models based on different word embedding methods. Each method is having its own advantages and disadvantages. But when these methods are fused or merged, the understanding is that we will be the better result compared to conventional method. It is a unique kind of experimentation presented here. The proposed model is evaluated with publically available data sets. Large number of experimental trails reveals the effectiveness of the model. The details are presented in the respective section.

Keywords: Sentiment Classification, Deep Learning.

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Recurrence State Input in Restate Networking Environment through Bash Process Kernel Scanning

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Abstract

Network level security visualization is considered to be one of the elite areas where most of the inquiry is going on in visualizing the additional nature of the system networks. Owing to many impuissant attacks many scrutinizer are organized towards security monitoring measures and hindrance execution towards encroachment. Many companies are having their attention towards estimating their findings on the progressive field. Here we can't get accessed to the information obtained from the user such as number of packets read and write, Input Output response time and delay time. We can conceptualize all server repute and activity and security contingency with client interplay. IMB Tivoli, spiceworks, xymon and intermapper are ample implements available in the market. Nearly all tools adapts by detecting certain things from network or server. Network stalk and network activity can be tracked and security outcome from the server and the interplay with the client can be viewed and also users framework can be visualized. In this paper, the intense area comprise of host or server monitoring, internal and external monitoring, port activity and attack patterns.

Keywords: Xymon, intermapper and network stalk

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IoT Enabling Technology towards Aqua Culture 4.0: Trends and Challenges

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Abstract

Fourth Industrial revolution – Industry 4.0 enforces the transforming industry, adding Aqua culture Industry and it has been treated Aquaculture 4.0. The enabling technologies adopting innovative ideology of Internet of Things gives an extra ordinary trace back support for aqua culture across its horizontals. In this paper a nourish survey is made to a possible extent referring to detailed work proposed in past by various researchers in aqua farming, Aquaponics, real time monitor, fish talk, precision aqua farming. The objective of this study is to provide summary of salient work done by enthusiasts, academicians, Industrial experts, and corporate officials in their vicinity of survival for species in fresh water lakes, ponds, sea water basins and many more. This paper found the need of in depth or empirical work and study, compromising field data binding analytics alongside the architectural conflicts possible, logical confronts arise in prescribed crafts of aqua culture 4.0.

Keywords: Aquaculture 4.0, Industry 4.0, Precision fish farming, pH, dissolved oxygen, Aquaponics, Tilapia.

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Face Recognition Based Door Monitoring System

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Abstract

In recent years, with the demand for better security, computers have played a large role. Due to their precision, large memory banks and high computing power, considerable development has been made in the area of face recognition. Computers now surpass humans in many face recognition tasks. A human being can remember limited number of faces. But a computer doesn't have any limits, and can hence be used where large databases of facial records are needed. Such a facial recognition system has many potential applications including crowd and airport surveillance, private security and improved human-computer interaction. Such a system is perfectly suited to fix security issues and offer flexibility to smart house control.

This project is aimed to be a complete system for face recognition: easy to build, cheap cost and effective. Main purpose is to be set as an alert for home visitors and provide information about the visitors in a dynamic website and phone application. It can also be used in other fields like industries, offices and even air-ports for identifying wanted people. Among the other bio-metric techniques, face recognition method offers one great advantage which is user friendliness.

Keywords: Internet of things (IoT), raspberry pi (RPI), Internet, Pi camera, android app, visitor alert.

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Performance Analysis of Machine Learning Algorithms for Text Classification

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Abstract

In present era, there is an increasing growth in the number of complex documents and texts that require an in- depth understanding of machine learning methods that classify texts accurately in various applications. Many machine learning techniques achieved outstanding results in natural language processing. The success of these learning algorithms is based on their ability to understand complex models and non-linear relationships between data. However, finding appropriate structures and techniques for text classification is still a challenge for researchers. In this paper, a brief overview of text classification algorithms is presented. This overview incorporates different text feature selection methods, existing algorithms and techniques, and evaluations methods. The shortcomings of each technique and their application in real-time application are discussed. In this study, we compare various features of TF-IDF Vectorizer to find the set which works the best under various classification models.

Keywords: Text mining, Text Classification, Text categorization, Document Classification.

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Sustainable and Smart Agriculture with Big data and Artificial Intelligence: A Review on Different Applications and Challenges.

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Abstract

In era of digitization and big data, sustainable and smart agriculture is the imperative concept which makes agriculture more systematic and efficacious with the help of different high-precision algorithms. Artificial Intelligence (AI) plays a pivotal role in the enhancement of smartway of agriculture. It gives an assurance on agricultural revolution when world need to produce more food with a few numbers of resources to feed global population. It divides the agriculture into different segments such as robotics, soil, water and crop management etc. This paper present a comprehensive review of research dedicated to applications of machine learning, deep learning with big data in smart agriculture andagricultural production systems. It also discusses current and potential applications of deep learning with big data in the various nodes of the agricultural supply chain and their impact, different future challenges regarding sustainable agriculture.

Key Words: deep learning, machine learning, bigdata, GIS,AI etc..

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A Machine Learning Approach for Drowsy Driver Recognition & Anti Sleep Alert

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Abstract

Every year many of us lose lives due to fatal road accidents around the world and drowsy driving is one among the first causes of road accidents and death. Fatigue and small sleep at the driving control are typically the basis reason behind serious accidents. However, initial signs of fatigue may be detected before a important state of affairs arises and so, detection of driver's fatigue and its indication is current analysis topic. Most of the normal strategies to find temporary state are supported behavioral aspects whereas some are intrusive and distract drivers, whereas some need expensive sensors.The new system mentioned in this paper relies on machine learning and computing. Driver security is that the main concern of the vehicle designers wherever most of the accidents are caused thanks to temporary state and fatigue driving so as to produce higher security for saving lives of passenger restraint are designed however this technique is helpful when accident is accord. However main drawback continues to be we tend to see several accidents happening and plenty of them are losing their lives.A deep learning methodology is employed to notice sleep states of the drivers within the driving setting. A convolutional neural network (CNN) model has been projected to see whether or not the eyes of certain constant face pictures of driver are closed. The projected model includes a wide potential application space like human-computer interface style, countenance recognition, driver drowsiness determination. Commonly used CNN models are used on identical information to check performances of the ready model. With regards to the classification results obtained, 96.5% and 92.99% of the designed model achieved success and it's seen that this structure may be utilized in this problem space.

Keywords: CNN models, classification, interface

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Volatile Organic Compounds as a Biomarker of Tuberculosis

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Abstract

Tuberculosis is an extremely contagious disease which spread mycobacterium tuberculosis to several peoples surrounding to them. Diagnosis of tuberculosis at an early stage is a very inspiring job. Current diagnosis tools take lots of time to detect this disease, which convert it to frightful disease. As compare to traditional methods biosensors detect fast but less sensitive. Volatile organic compounds in breath are the biomarkers of active pulmonary tuberculosis. These biomarkers are generates from the metabolism of mycobacterium tuberculosis. There are four specific volatile organic compounds i.e. methyl nicotinate, methyl henylacetate, o-phenyl anisole, methyl p-anisate of tuberculosis which are present in breath. Detection of tuberculosis in breath is a non-invasive method which is beneficial for children and old age people. The amounts of these biomarkers are increase in tuberculosis positive patient as compare to negative patient. The main focus of this review is on volatile organic compounds which are the specific biomarkers for detection of tuberculosis.

Keywords: Mycobacterium Tuberculosis, Biomarker, Biosensor, Volatile Organic Compound

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Plant Growth Prediction and Analysis using Convolutional Neural Networks with Suitable Activation Function

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Abstract

The economic growth of farmers depends on the quality of the products that they produce. Quality relies on the plant's growth and its yield. Based on the study, about 30k hectares of agricultural land is decreasing per year. So to feed the increasing population of India we need more yield on the agricultural land which is under cultivation. Predicting plant growth will help the farmers to take appropriate measures. Prediction also helps the agriculture associated industries for planning their production business. This paper proposes a cost-effective method of predicting the growth of the plant. The embedded system consisting of a camera and raspberry pi developed to capture an image remotely and fed to Convolutional Neural Network (CNN) for accurate prediction. CNN algorithm is used to classify the stages of the plant. The proposed system used to find the area of the leaves which helps in estimating the days remaining for harvesting the plant.

Keywords: Raspberry Pi, CNN algorithm, prediction, plant growth.

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Hive and Impala: Performance Based Comparison

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Abstract

Big Data is a term that refers to all the data generated by human and machine across the globe, mostly five important vectors of big data define big data realm - volume, velocity, variety, value and veracity. Storing, and analyzing bigger data which is available in different formats is increasing with huge velocity to obtain values out. So queries in big data should be speedy for getting the valuable information to enhance the system performance. To go with this goal, developer of big data develop these two technologies which are respectively Hive and Impala for better querying and processing big data. In this paper, we differentiate these two types of query tools to calculate time taken by Apache hive and Apache Impala by defining same problem statement. Basically we distinguish the comparative strength of two technologies called Hive and Impala. In efficiency and performance, total time taken by these technologies for their execution. We focus on performance analysis using Cloudera Engine Including Apache Hadoop (CDH).

Keywords: Hadoop, Hive, Impala, MapReduce, Big Data, workflow

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Energy-Aware Dynamic Load Balancing in Amazon Web Service Cloud Network

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Abstract

The revolution of IT , ICT and GSM has changed the scenario of computing & storage in a tremendous way that demanding the high scalability and elasticity of cloud dynamically. Variety of network topologies, routing and multicast algorithms are adopted to increase the throughput performance and maintaining load of the system. In this paper effort has been put to maximize the quality of computing as well as storage in a limited bandwidth considering less consumption of energy in diverse situation. The work is focus on transferring of data from S_3 to EC_2 of Amazon which is a leading cloud computing platform. These two services co-ordinate each other in maximizing downloading throughput. The work stealing algorithm in improved version has been tested in different conditions to increase the accuracy of computing and services.

KeyWords: Throughput, S_3, EC_2, Multicast, work stealing, cloud computing, elasticity, scalability.

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Hybrid Locomotion Robot for Mine Detection and Surveillance

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Abstract

The Indian army being the second largest standing army in the world and also the largest component of the Indian armed forces, remote observance and round the clock surveillance is important for security functions. In several cases deploying manpower for the purpose is tough and dangerous. Autonomous bodies like remote controlled rovers and quadcopters having multisensors depending on the environment is essential. One such demand is mine detection and vast area surveillance. The proposed system is a hybrid locomotion (flying and moving on flat surface) mechanism for mine detection and surveillance. This involves a robot with multisensors for above application. Here recognition distance is improved using an HC-12 module. It uses GPS for trailing and positioning functions. Once the robot detects a mine, it sends a message in conjunction with the precise location. As soon as the mine is detected the quadcopter detaches from the robot and rises above the ground. The camera attached gives a 360degree view of the area. The above is a tailor-made development and hence add-on sensors or controllers, weather sensors etc may also be incorporated.

Keywords: Arduino uno, raspberry-pi,HC-12 module

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An IOT Based Staple Food Endowment and Waste Management System for Foster Care using Arduino and Blockchain

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Abstract

IOT usage in everyday lives is potential and can be applied in different fields; lamentably the execution in the social field is as yet inadequate. The data about the nourishment saves for huge number of halfway houses in India are not effectively accessible; anyway givers think that it's hard to get the correct data about nourishment holds, particularly staple nourishment stock in foster care. This venture proposes an electronic IOT framework where staple nourishment stocks and the wastage of food stocks in halfway houses can be distinguished by Arduino device which is associated with sensors. The data from the Arduino is transferred into the web application. Benefactors gives nourishment items through exchanges with specialist organizations, and nourishment providers will dispatch things to the halfway house. Blockchain is applied to all gatherings in system using SHA256 hashing algorithm to be made sure about and diminish exchange control.

Keywords: Internet of Things, Arduino, Blockchain, Foster care, Endowment.

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Applicability of Classification Techniques in Predicting Emotional Health

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Abstract

Mental health and social media are closely related domains of study. Emotional health or mental disorders such as depression, and anxiety can be predicted using social media. Depression is one of the leading mental illnesses that impact the stability of mind and daily life of people. Early detection or diagnosis of depression is necessary before it becomes a severe problem. Now-a-days, people are more engaged in one-to-one human interaction and feel free to express their feelings, sentiments or emotions on social networking sites like Facebook, Twitter etc. rather than direct communication. So, data on social media about sentiments, opinions or emotions of people can be used to predict the mental state (depression) of person using opinion mining or sentiment analysis classification techniques. This article provides a critical review of sentiment analysis, its classification techniques in predicting depression among people on social media. This research work also present the steps involved in emotional health (depression) diagnosis using sentiment analysis over social media and challenged observed in analyzing the emotions.

Keywords: Mental health, Depression, Social media, Sentiment analysis, Emotions

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CyberSecurity Trends in Information Technology and Emerging Future Threats

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Abstract

In Cybersecurity trends which are a buzz words for people, companies and establishments of all volumes, every work areas has different importance levels and awarenesss.So every group of organization will have lists of CyberSecurity trends you will know around the Internet difffer fairly a bit on your basis. Yet, many of the records do in any case go in with a few familiar distinctiveness. And as a cyber importance need for better CyberSecurity defense mechanisms. CyberSecurity is essential job of every industry which is relying on cyber world, cloud based services where the success is measured by security that a company is providing and threats make the headlines of the Cyber World. Cyber Criminals are emerging their new ways as the organizations struggling without weapons with cyber attack response and the expenditure that they are paying as ransom for the criminals. With these trending information security breaches most of the organizations are focusing on the CyberSecurity trends prevailing today.

Keywords: *Cybersecurity, Mobile Security, Phishing, Vishing, Smishing*

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A Smart System for Alcohol and Heart Attack Detection in Transportation using IOT

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Abstract

In this modern world, we are depending on devices for doing our work in day-to-day life, which is interconnected through networks of networks. Internet of Thing has a major growth in this changing world to innovate new ideas to make things smarter. As per the recent survey published by World Health Organization reveals that most of the accidents in India occur due to the cardiac -arrest while driving and drunk and driving. Our proposed mainly focused on the safety measures for both driver and vehicle. We used "Prevention is better than cure" proverb which makes our life safe and secured. Like the proverb in this paper we described our concept which makes the drivers to follow the road rules to drive the car. Our Government asked drivers to follow the Traffic rules, but drivers refused to follow road rules like buckle up seatbelt, don't drink and drive vehicle, stop in red signal. If we implement the concept in this modern world then surely there will be reduction in accidents.

Keywords: Interconnected, innovative and WHO.

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Layered Approach for Data Sharing in Cloud Environment Analysis

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Abstract

In this we integrate layered approach for data sharing mechanism for cloud computing storage. In our proposed fine-grained program in particular, an access control based on attributes is introduced for both user secret key and lightweight security devices. As a user cannot access the system if he/she doesn't knows the both, this mechanism enhances the protection of the system.Especially in those circumstances where a lot of users share the same web-based cloud services system.The attribute- based access control within the framework often allows the cloud server to restrict access to those users with the same collection of attributes while maintaining user privacy, i.e. the cloud server knows only that the user fulfills the predicate provided, but has no knowledge of the user's precise identity. Finally ,we also do the stimulation to demonstrate practicability of our proposed system.

Keywords: Fine-grained program, Stimulation and practicability.

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Comparative analysis of different atmospheric Weather Condition in Free Space Optical Communication System

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Abstract

Free space optical (FSO) communication is one of the recent technology in a mode of wireless communications. FSO is a data transmission method that requires a line-of-sight between transmitter and receiver from unguided media through an optical carrier in the atmosphere. In the FSO communication system attenuation of information mainly arises because of atmospheric turbulence such as scattering, absorption, scintillation, and fluctuation in the intensity of laser beam, etc. Here in this paper, we are comparing the performance of different modulation technique on atmospheric attenuation of signal for FSO system. Atmospheric attenuation models are discussed in detail. At the end advantages and application are also highlighted.

Keywords: Atmospheric turbulence, free space optical (FSO), lasers, los (line-of-sight), optical wireless communication (OWC), scintillation, frequency slot unit (FSU).

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Opportunities of E- Learning

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Abstract

"Learning never exhausts the mind "– Leonardo da Vinci .Online teaching and learning have been trending a lot lately because of their easy availability and their round the clock access, which feels like a tailored suit for many people who are juggling various activities and responsibilities in their lives. According to a Comparative analysis of student performance between Face to face (F2F) and Online classrooms on Frontiers, the impact on student performance with regard to the teaching environment, the results were surprisingly neutral. Students who did well in Face to Face classes did almost as well on online platforms as well.

A small group of students who need a more slow-paced learning environment can easily excel in online platforms. They can re watch the clips of videos or reread the piece of information which wasn't well absorbed the first time with ease on online platforms. A few issues come into light at this point. How will the students be motivated to start learning, taking into account their diverse atmosphere and different set of issues each of them has to deal with ?

Keywords: E-Learning, slow-paced learning and face classes.

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PAPER ID: ICRCSIT-0281

Web of Things for Smart Health Protection Advancements and Openings

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Abstract

Web of Things structures maintained to human administrations upgrade existing development, and the general demonstration of drug. They expand the extent of specialists inside an office and far past it. IOT increase both the precision and size of clinical data through different data grouping from huge game plans of authentic request. They moreover bolster the carefulness of clinical commitment transport through progressively current blend of the social protection structure. In this study paper communicates that how IOT interrelate to various system counting the canny social protection which is one of the standard structure. Human administrations structure has the observation that proposed the need of canny contraptions and splendid things to lessen the disarray of available social protection system. The IOT based human administrations has overhauled advancement which is chic from the commendable social protection and hard and fast clinical system.

Keywords: Internet of things (IOT), Electrocardiography (ECG), health care.

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PAPER ID: ICRCSIT-0282

Performance Analysis on Higher Education System Using R Tool

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Abstract

Big data is the term for any gathering of datasets so vast and complex that it gets to be distinctly troublesome to process using traditional data processing application. Evaluation is an integral part of education. Although there are various methods of teachers' evaluation, student's feedback is considered as the most effective and reliable method albeit a contentious one. In this study, we have tried to evaluate the effectiveness of teaching professional through students' feedback using Google form in our college. The aim of this study was to improve the quality of teaching by introducing students' feedback for teachers' evaluation system in a college. Implemented in R Tool. This feedback was obtained through a performance which was validated through peer review and the analysis is done using R Tool.

Keywords: Big Data, Google Form, R Tool

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PAPER ID: ICRCSIT-0283

Application for Gender, Age and FaceRecognition Using OpenCV

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Abstract

The thought behind the face recognition framework is the way that each individual has a one of a kind face. Like the unique finger impression, a person's face has numerous novel structures and highlights. Facial verification and facial recognition are testing undertakings. For facial recognition frameworks to be dependable, they should work with incredible exactness and precision. Images caught considering diverse outward appearances or lighting conditions permit more prominent exactness and precision of the framework contrasted with a situation where just one image of every individual is put away in the database. The face recognition technique handles the caught image and thinks about it to the images put away in the database. In the event that a coordinating format is discovered, an individual is distinguished. Something else, the individual is accounted for as unidentified. This paper portrays and clarifies in detail the whole procedure of creating Android versatile application for perceiving individual's gender, age and face. Face detection and recognition strategies that have been utilized are portrayed and clarified just as improvement devices utilized in the advancement of Android versatile application. The product arrangement depicts the subtleties of utilizing the OpenCV library and shows the real aftereffects of the portable application through the images.

Keywords: Face detection, deep neural network, face recognition, Android application, gender, age, face recognition, OpenCV, Android Studio.

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Smart Traffic Light System

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Abstract

The developing populace and expanded vehicles lead to the fundamental difficulties in urban life. Hence, the job of traffic the executives will spare time and fuel utilization and decrease natural contamination. Lately, Internet of Things (IoT) and keen urban communities drive another field of wise traffic the executives. In this paper, another strategy for traffic light control is introduced by utilizing the mix of IoT and picture and video preparing methods. In the proposed models, traffic light planning is resolved dependent on the thickness and the quantity of passing vehicles. In addition, it is executed by Raspberry-Pi board and OpenCV device. The logical and trial results show the productivity gave by the proposed models in astute rush hour gridlock the executives.

Keywords: Internet of things, Smart city, Traffic management, Raspberry Pi, Image and video processing.

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Cross User Key Control Mechanism in Cloud Computing

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Abstract

Sharing of resources on the cloud can be achieved on a large scale since it is cost effective and location independent. Despite the hype surrounding cloud computing, organizations are still reluctant to deploy their businesses in the cloud computing environment due to concerns in secure resource sharing. In this paper, we propose a cloud resource mediation service offered by cloud service providers, which plays the role of trusted third party among its different tenants. This paper formally specifies the resource sharing mechanism between two different tenants in the presence of our proposed cloud resource mediation service. The correctness of permission activation and delegation mechanism among different tenants using four distinct algorithms (Activation, Delegation, Forward Revocation and Backward Revocation)are also demonstrated using formal verification. The performance analysis suggests that sharing of resources can be performed securely and efficiently across different tenants of the cloud.

Keywords: Cross User Access Control, Formal Specification and Verification, Cloud Computing.

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PAPER ID: ICRCSIT-0291

Integrated Crop Protection Management

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Abstract

In the present era the main problem faced by farmers in agriculture field is mainly about the diseases of crops due to many pets or also because of unexpected change in climatic condition. The main problem faced by farmers is, they are unable to identify the causes for the affected plant/crop and the necessary precautions or preventive measures to be taken and to cure the affected plant/crops. So, we are describing how to take preventive measures about climatic conditions, identify the affected crop or plant by selecting the categories like crop or weed it will compare with the images of affected plants as well as healthy plants already stored in database and they will come to know about the name of the disease and also ways to correct it and the symptoms which caused disease. We have also designed a system to notify the necessary climatic conditions for the plant and also send notification to them if there is any change in the climate. This will help farmers to improve their product quality and also the production which will help them to meet the needs and also improve our nation's economy as agriculture is backbone of our country.

Keywords: CANNY'S edge detection, Histogram, RGB, Sobel Edge Detection

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Automated Medicine Distributor Based On Symptoms Using Nodemcu And Cloud

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Abstract

Internet of Things (IoT) is a new technological paradigm that can connect things from various fields through the Internet. For the IoT connected healthcare applications, all the sensors are connected to Arduino UNO. Through this system, we can measure ECG, heartbeat and Temperature. All these analog sensors can be connected to Arduino through any of the six analog pins. These values are then used for detecting any critical situation. In the case of a critical situation, an alert can be given as a message. Also, it is possible to monitor the person's health from any location in the world through the cloud. Data from sensors is uploaded to the periodically without any interruption if the internet is available. Here ESP8266 Wi-Fi module is used for connecting Arduino to the internet. With the help of RFID reader and tag we can their preliminary details. The medicine buyers can enter the symptoms through webpage and based on the details the medicine tray gets automatically opened.

Keywords: IRsensor, Motor Controller,RFID tag.

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Sentiment Analysis on CAA & NRC using Machine Learning

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Abstract

Twitter tweets contains textual data, most suitable for sentiment analysis. Words in Tweets have 3-types of antinomy such as Positive, Negative and Neutral. We use these three polarities for sentiment analysis and analyze people's view about trending topics. Now a day, many social networking platforms are available such as Facebook, Whatsapp, Web2.0, etc., but twitter is most suitable for this experiment due to its easily available text information. The principle point of this paper is to know the assessment of twitter clients on Citizen Amendment Bill (CAB), Citizen Amendment Act (CAA) and National Register of Citizens (NRC). Researchers used twitter API by using R to get the tweets. They use R language for sentiment analysis and opinion mining. Corpus based and dictionary based methods were used to explore opinion of tweets given by twitter users. This paper makes an effort to show the opinion of Twitter user's tweets written in English regarding CAA and NRC, on the basis of using Machine learning algorithm, twitteR, Tidy Text, tm package, and further classifies the tweets sentiment in the type of Positive, Negative and Neutral.

Keywords: CAA, CAB, NRC, Twitter, Sentiment Analysis, Natural Language Processing, R, Twitter API.

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Study on AI Employment During Covid and Possibilities for Future Wars

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Abstract

The recent outbreak of COVID 19 is comparable to outbreak of any other havoc on the mankind including war, due to similar characteristics of three Vs i.e. Velocity; Volume and Veracity. In this study the employment of AI duringoutbreak of COVID19and measures to control and find solution hasbeen studied. A comparison has been arrived at on similar results likely to be achieved by AI during a future war. The research question is that "How much reliance should belaid upon AI duringa future war."With reference to ethical and legal issues related to AI in employment of Killer Robots the study recommends future course of action. We need to ensure that no rogue application of AI takes place in a sector where the very existence of humanity is at stake.

Keywords: ArtificialIntelligence (AI), Lethal Automated weapon system (LAWS),Killer Robots, Ethical Governors

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Collaboration of IoT using SDN with Data Mining

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Abstract

With the rapid increase in use of Internet of Things (IoT) due to recent advancements in communications and sensor technologies, Interfacing every object together through internet looks very difficult, but within a frame of time Internet of Things will drastically change our life. The enormous data captured by the Internet of Things (IoT) are considered of high business as well as social values and extracting hidden information from raw data, various data mining algorithm can be applied to IoT data. In this paper, We collaborated IoT using SDN with data mining. Finally we discussed challenges in IoT.

Keywords: Interfacing, IoT ,SDN

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A Correlative study of Machine Learning Classification Techniques for Anomaly Based Intrusion Detection System

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Abstract

Data explosion is the most significant problem being faced in today's security world. This explosion is due to increased number of internet users, deployment of sensors etc. This data comes up with high velocity, variety and volume. As the data size increases, information security plays a major role. Intrusion detection system is software that is deployed in the perimeter of a network, computer and firewalls to monitor and analyze the data to detect any suspicious or anomalous behavior in the incoming traffic. To detect malware and various attacks in this big data, traditional techniques may not be fruitful to yield accurate results. Machine learning techniques overcome the limitations of existing techniques and present high rate of efficiency for large datasets by reducing false negatives and increasing accuracy. IDS are categorized as Signature-based detection and Anomaly-based detection. J48, Support Vector Machine (SVM) and Extreme Learning Machine (ELM) techniques are applied as they are prominent for classification. NSL-KDD dataset is used for the application of above mentioned algorithms for efficient anomaly based detection. The results show that J48 perform better in detecting anomalies compared to SVM and extreme learning techniques..

Keywords: Machine learning, Intrusion detection system, Support vector machine, Extreme learning machine.

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Fusion of Medical Images using Image Processing and Fuzzy Logic Based Techniques: A Survey

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Abstract

The impact of Artificial Intelligence is high in the recent years. As the technology became more available to the common man, the usage also became higher when compared to previous years. Man became so dependent that he wants his air conditioner to be in running even before he reach his home. IoT made these things possible with the use of sensors and cloud based computing. But the main backdrop in this model is that though IoT allows us to be served at the earliest, its security is also of major issue to be resolved. As the Cloud allows some limits in the bandwidth physically which introduced, increased usage and increased performance of Edge computing. This paper provides an overview of the abilities of Edge computing and its Security issues in IoT and Artificial Intelligence with the architecture and layers

Keywords: Medical image fusion, Fuzzy based fusion, ANFIS model, Selective part fusion, Fuzzy Algorithm

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Real Time Audio Visual Experience in Museums using Deep Learning

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Abstract

This paper contributes towards the identification of species from images captured by the device and providing a brief explanation about it. The image recognition is done using deep learning. The proposed system discusses the development of effective details in the museum using Convolution neural network (CNN). It makes use of VGG16 and Logistic Regression algorithms to achieve the purpose. VGG16 is preferred as it uses V-type architecture that improves accuracy and provides integrated prediction. In addition to this it makes use of optimization techniques to increase accuracy. Once the image is captured, it is converted to both text and audio format.

Keywords: Image processing, Convolutional neural networks, deep learning, Museum

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Sentiment Analysis and Visualizationof Real-Time Twitter Data

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Abstract

Sentiment analysis refers to the application for processing natural language, text mining, computational linguistics, and biometrics to methodology recognizes, extract, quantify, and learn affective states and subjective information. Twitter, being one among several popular social media platforms, is a place where people often choose to express their emotions and sentiments about a brand, a product, or a service. Analyzing sentiments for tweets is very helpful in determining people's opinions as positive, negative, or neutral. This paper evaluates the people's sentiment about a person, trend, product, or brand. Twitter API is used to access the tweets directly from twitter and build a sentiment classification for the tweets. The outcome of the analysis is depicted for positive, negative, and neutral remarks about their opinions using visualization techniques such as Google charts.

Keywords: Sentiment Analysis, Machine Learning, Tweepy, Textblob, Google Charts, Wed Flask.

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A Review: Machine Learning based Chronic Kidney Disease Prediction

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Abstract

Long-term Renal infection is a serious health issue that gradually reduces the kidney function. Initial stage of prediction can help, perhaps to lessen the continuous infection of this chronic disease. The exact implication of Long term Renal disease (CKD) or final stage renal disease (FSRD) cannot be estimated accurately. the Symptoms of CKD is not observed properly at the early stage and it becomes difficult to predict,which leads to the permanent damage to the functioning of the Kidney. In Health care it has become a challenging task to predict at the earliest stage by observing the related symptoms and do the necessary test at the earliest. The early prediction of CKD has been deliberately studied using Machine Learning algorithms. different classifier algorithms such as Naïve Bayes, ANN, Ada Boost, Gradient Boost, Random Forest, NN-CBR studied and their performance is being Compared with respect to the accuracy, sensitivity, specificity. Here we will have a brief discussion of these algorithms and their shortcomings with the performance measures with each other. In this Survey, the different Machine Learning methods are reviewed to determine, which algorithm can accurately detect the early stage of the renal problem.

Keywords: Long term Renal (Chronic Kidney disease), Random Forest,Naïve Bayes, NN-CBR, KNN, Ada Boost and Gradient Boost, Artificial Neural Network

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An Autoencoder Neural Network Approach for High-Resolution Images from Low-Resolution Images

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Abstract

In this paper, a faster and deeper convolutional neural network with Auto encoder is used to achieve high test accuracy and low test error high-resolution images from low resolution images. In the proposal artificial neural network (ANN) is modeled to obtain the high resolution image. To achieve this, a multilayer neural network with a single fully-connected hidden layer, a linear activation function and a squared error cost function trains weights that span the same subspace as the one spanned by the principal component loading vectors. In addition, regularizations in the joint training scheme is crucial in achieving good performance, by improving the quality or clarity of images for human viewing by removing blurring and noise and increasing contrast, and brightness of the image. In various applications, where an image is to be reconstructed, from its degraded version, the performance of the fast non-iterative algorithms needs to be evaluated quantitatively. The Artificial neural network model is used to develop the image excellence or appearance for human perception and intervention and also reduces the computational time. Finally, it is empirically evaluated the performance of this joint training scheme and observed that it's not only learns a better data model, but also learns better higher layer representations, which highlights its potential for unsupervised feature learning.

Keywords: Low Resolution, High Resolution, Convolutional neural networks, Autoencoder.

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A Comparative Study on Heuristic Searches

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Abstract

The need to solve large problems with large number of possible statesand to increase the efficiency of search algorithms, problem-specific knowledge like heuristic search needs to be added. Heuristic search is a technique to solve a problem faster than classic methods. Using this search the solution will have accuracy, completeness or precision for speed. In each iteration, it evaluates the available information and choses the next path to follow. The problem solving method using various heuristic search techniques are discussed here.

Keywords: Hyper heuristic, cyber security, malware, perturbation heuristics.

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The Efficiency of Sequential Pattern Mining is Enriches by Turing Machine

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Abstract

Today there is a lot of computation in every business to overcome. The trends in the industry have been changing daily, and analysis is an ongoing process. In the present scenario, almost all the work becoming computerized, so all the data and information is processed and stored in the computer system. The storage capacity of data is increasing massively. The quantity of data in the world becomes double through every year. Retrieval of data, hidden data and information is quite tricky tasks. The mining of sequential patterns points out the problem of discovering the many existent sequences in a given database. The constraint type inclusive property is introduced to prune the computational cost and enhance the performance which is given by user-centric patterns. The inclusive property incorporates more than one constraint in the recognition of patterns. In the constraint-based algorithm, those uses formal language tools to incorporate constraint gives better performance but these algorithms need to recognize the grammar type and recognize the type of grammar is a quite difficult task. We propose a novel algorithm Sequential Pattern Mining with the Turing Machine. The Turing machine accepts any type of grammar. The Turing machine is cable to solve the problems solved by modern computers. It accepts all kinds of languages hence there is no need to recognize the type of grammar. It generates any natural language grammar. It is a core part of Artificial Intelligence. The performances of the algorithms are compared with the new algorithm then performance is enhanced.

Keywords: Natural Language, Turing Machine and language grammar.

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Smart Farming Framework

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Abstract

This paper presents the end to end business model of smart farming. This paper stresses that the framer not only cultivates the land but also can sale goods and market his/her own brand. It is the formula or model how framer can make his own decision and how he/she can be independent for selling their goods and/ or generating electricity, water and fertilizer. Using this model, a farmer can be independent or minimally depend on others or government. This will also guide on how to implement government policies wisely to gain more profit. This paper represents twelve steps of smart framing. Hence, anyone can do farming as a business by using this model.Online survey was also conducted to explore views of 51 customers regarding online purchase of grain and vegetables. Results revealed that majority of the customers expressed to purchase products online. WhatsApp and YouTube are commonly preferred social media. Customer also reported to know more about product backtracking and directly purchase from the farmer. Hence, this paper gives broad idea about smart framing and customers views related to direct online purchase including product details.

Keywords: WhatsApp, Youtube and direct online purchase.

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Biometric Based Online Voting using Blockchain Technology

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Abstract

The electronic voting has emerged over time as a replacement to the paper-based voting to reduce the redundancies and inconsistencies. The historical perspective presented in the last two decades suggests that it has not been so successful due to the security and privacy observed over time. This paper suggests a framework by using effective hashing techniques to ensure the security of the data. The concept of block creation and block sealing is introduced in this paper. The introduction of a block sealing concept helps in making the block chain adjustable to meet the need of the polling process. The use of consortium block chain is suggested, which ensures that the blockchain is owned by a governing body (e.g., election commission), and no unauthorized access can be madefrom outside. The framework proposed in this paper discusses the effectiveness of the polling process, hashing algorithms utility, block creation and sealing, data accumulation, and result declaration by using the adjustable block chain method. This paper claims to apprehend the security and data management challenges in block chain and provides an improved manifestation of the electronic voting process.

Keywords: Data accumulation, manifestation and unauthourized access.

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Understanding Business and Governance Prospects of Block Chain Technology: A Legal Primer

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Abstract

Ecosystem is common term used for interconnected systems. Technology when coupled with diverse system within the society, tangible and intangible, it creates an ecosystem that is complex in nature. One such ecosystem that is in vogue is the blockchain ecosystem. Being a complex ecosystem, the nature of technical and associated legal issues will be diverse and novel, which requires immediate attention owing to it's widespread use in various sectors. In this research paper, the major issues addressed and analyzed with respect to blockchain technology are two-fold, first one being, the legal and technical inefficiency in applying blockchain to business process and secondly, the legal and technical inefficiency in applying blockchain to governance process. The need for a global regulatory and infrastructure to diminish the associated legal inefficiencies will be the major analysis.

Keywords: Ecosystem, Blockchain, Tangible, Intangible, Analysis

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Identify Type of Diabetes Disease from a Large Dataset Using Classification and Data Mining Techniques: A Survey

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Abstract

Diabetes is among one of the most common diseases in the world however diabetes is curable and controllable but it affects lots of the body parts and imbalance many other things present in human blood. Diabetes is an alarming situation for the patient because due to this many other diseases may occur in the human body. It is of two types Type 1 Diabetes and type 2 diabetes, in which type 2 diabetes is most common in people and type 1 is genetic transferable diabetes. here, in this paper, we are analyzing the different diabetes dataset available online and also different strategies used by researchers to product and classify this disease. Finally, conclusion section contains evaluation of some very famous soft computing techniques like Support Vector Machine, artificial Neural Network (ANN), Decision Tree, K Nearest Neighbor approaches which may help researches and physician of the relevant field.

Keywords: Diabetes, Human Blood, Vector Machine, Artificial Neural Network, Decision Tree, K Nearest Neighbor.

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Internet of Things Applications and Challenges in Healthcare

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Abstract

The world of internet of things is a world where all devices are connected to internet by different technologies and protocols, in different domain of application. The world of internet of thing creates an interaction between object (physical things) and internet (digital technologies), using actuators or sensors or others, and collaborates with each other. The connected device can be used as a collecting object for data and it's the input case of IoT or as an analyzing device and it's the output case of the IoT. More than that there is different domain of application of internet of things, different protocols and frameworks used and the most important is that there are different architecture design depending of the use of the connected device. We will present a comparison between architectures, protocols (characteristic, execution time and performance), we discuss the frameworks and their challenges and limits. Finally, we will give synopsis evolution of IoT in Healthcare.

Keywords: Internet of Things, Architectures, Protocols, frameworks, application.

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Deep Learning Technology Create Use Of For Recognizing Malevolent Uniform Resource Surveyor

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Abstract

Malicious Uniform Resource locater website is a primary mechanism to host unsolicited content, like spam, malicious advertisements, phishing, drive-by exploits, to call few. There's imperative to discover the malicious URLs in timely manner. Previous studies have used blacklisting, regular expression and signature matching approaches. These approaches square measure utterly ineffective at sleuthing variants of existing malicious address or entirely recently found address. This issue are often relieved by proposing the machine learning primarily based answer. Sort of answer needs an in depth analysis in feature engineering and feature presentation of security artefact type e.g. URLs. Moreover, feature engineering and have illustration resources should be endlessly reformed to handle the variants of existing address or entirely new address. In recent times, with the assistance of deep learning, artificial intelligent (AI) systems achieved human-level performance in many domains and even outperformed human vision in many laptop vision applications. they need the aptitude to extract best feature illustration by itself by taking the raw inputs. To leverage and rework the performance improvement of them towards the cyber security domain, we have a tendency to propose Deep URL Detect (DUD) within which raw URLs square measure encoded victimisation characters level embedding. Character level embedding may be a state of the art technique in informatics for representing character in numeric format. Hidden layers in deep learning architectures extract options from character level embedding and so feed forward network with a non-linear activation perform estimates the likelihood that the address is malicious. The performance obtained by projected technique, DUD is nearer and computationally cheap in compared to numerous state of the art deep learning primarily based character level embedding ways all told check cases. Moreover, deeplearning architectures supported character level embedding models out performed illustration.

Keywords: Malicious, DUD, Deep Learning.

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An Automatic Nuclei Cells Counting Approach using Effective Image Processing Methods

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Abstract

The paper describes our experiments of automated digital histological image analysis. In our study we investigated two tasks. The primary goal was to develop a simple and effective automated scheme of cell nuclei counting. The second goal was to demonstrate that for histological images with homogeneous background we can apply a binarization technique and approximately calculate the number of nuclei in the image. The experiments were done on two public datasets of histological images. The experiments have demonstrated acceptable level of calculation results.

Keywords: Histological, Nuclei, Binarization, homogeneous, datasets.

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PAPER ID: ICRCSIT-0319

Vision Sentiment Analysis

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Abstract

Visual sentiment analysis, which studies the emotional response of humans on visual stimuli such as images and videos, has been an interesting and challenging problem. It tries to understand the high-level content of visual data. The success of current models can be attributed to the development of robust algorithms from computer vision. Most of the existing models try to solve the problem by proposing either robust features or more complex models. In particular, visual features from the whole image or video are the main proposed inputs. Little attention has been paid to local areas, which we believe is pretty relevant to human's emotional response to the whole image. In this work, we study the impact of local image regions on visual sentiment analysis. Our proposed model utilizes the recent studied attention mechanism to jointly discover the relevant local regions and build a sentiment classifier on top of these local regions. The experimental results suggest that 1) our model is capable of automatically discovering sentimental local regions of given images and 2) it outperforms existing state-of-the-art algorithms to visual sentiment analysis.

Keywords: Visual sentiment Analysis, Challenging Problem, Computer Vision, Algorithms.

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PAPER ID: ICRCSIT-0320

Big Data Integrated with Cloud Computing for Prediction of Health Conditions

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Abstract

The increase in population will be accompanied by an increase of chronic diseases and medical conditions. The growing problem of disease will require efficient systems to reduce the burden on healthcare provider's .In order to improve the life expectancy of patients with chronic disease, this research will propose a big data analytics system using cloud-based technologies for patients suffering from chronic diseases. continued innovation in the area of health information technology will help providers to reduce inefficiencies and improve the system's capabilities .By investing in technologies tools like big data analytics, health providers have the opportunity to improve diagnosis and preventive care, save lives and lower costs by monitoring and managing patients more effectively in their homes.

Keywords: Chronic, Diseases, Medical, Big Data Analytics, Cloud Based Technologies, Monitoring, Managing.

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PAPER ID: ICRCSIT-0321

Object Detection and Classification using Yolo-V3

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Abstract

Object Detection is being widely used in the industry right now. It is the method of detection and shaping real-world objects. Even though there exist much detection using the YOLOv3 algorithm by deep learning techniques. It first makes expectations crosswise over 3 unique scales. The identification layer is utilized to make recognition at highlight maps of three distinct sizes, having strides 32, 16, 8 individually. This prepared with an improved model. At long last, we endorse implies, with partner contribution of 416 x 416, we will in general form location on scales 13 x 13, 26 x 26 and 52x 52. Meanwhile, it also makes use of strategic relapse to anticipate the jumping box article score, the paired cross-entropy misfortune is utilized to foresee the classes that the bounding box may contain, the certainty is determined and afterward the forecast. It results in perform multi-label classification for objects detected in images, the average preciseness for tiny objects improved, it's higher than quicker RCNN. MAP increased significantly. As MAP increased localization errors decreased.

Keywords: YOLOv3, Deep learning, dimensional clustering, object detection.

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Smart Glove

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Abstract

About nine billion people in the world are deaf and dumb. The communication between a deaf normal visual people. This creates a very little room for them with communication being a fundamental aspect of human life. The blind people can talk freely by means of normal language whereas the deaf-dumb have their own manual-visual language known as sign language. Sign language is a non-verbal form of intercourse which is found amongst deaf communities in world. The languages do not have a common origin and hence difficult to interpret. The project aims to facilitate people by means of a glove based communication interpreter system.The glove is internally equipped with five flex sensors. For each specific gesture, the flex sensor produces a proportional change in resistance. The processing of these hand gestures is in Arduino nano Board which is an advance version of the microcontroller. It compares the input signal with predefined voltage levels stored in memory. According to that required sound is produced which is stored is memory with the help of speaker. This decreasing ratio of Literate and Employed Deaf and Dumb population is a result of the physical disability of hearing for deaf people and disability of speaking for dumb people so it yields to lack of communication between normal person and Deaf and Dumb Person.

Keywords: Flex sensors, Arduino nano Board

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Real Time Healthcare Monitoring System for War Soldiers Using WSN

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Abstract

In this day and age, fighting is a significant aspect at all country's safeness. Many significant and indispensable jobs is carried by the military commandos. Many of numerous worries in regards to the security of commandos. Duly for their safeness reason, numerous devices are placed on them to see their wellbeing level just as their constant area. Bio-sensor frameworks include different kinds of minimal physiological sensors, transmission modules and dealing with limits, and would hence have the option to empower ease wearable subtle responses for prosperity checking. This sheet provides a capacity to follow the territory and screen wellbeing of the commandos progressively who become vanished and get harmed in the combat zone. It assists with limiting the period, search and salvage activity endeavors of armed force control unit. This framework empowers to armed force control unit to follow the area and screen strength of commandos utilizing GPS module and wireless body area sensor networks (WBASNs), for health monitoring. The proposed framework is executed by utilizing the Arduino IDE programming.

Keywords: Cluster, NRF Module, Cloud, WSN, Commander-in-Chief, Redundancy

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Designing an Automated System for Identification and Reckoning of Livestock and Price or Health Prediction using Machine Learning

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Abstract

The world around us is getting automated, with the advanced technologies. Automatic system has additional advantage over hand-controlled system as they are more productive and reduces the need for tediousmanuallabor. Agriculture is the major supply of financial gain and as it is the prime sector in economy of India and also in other growing countries, it is necessary to automate it to improve the productivity. Lots of manual labor is required in an ordinary farm. The only way to moderate the manual labor is to automate it and to make farming quicker and easier, resulting in additional agricultural growth. Developments and sensor technology which have taken place, and which are in progress, will make accessible increase in amount of information relevant to monitoring cattle's and their atmosphere,their production, growth and health. Individual animal health is improved by the system and it also recognizes and stops the spread of disease. This system helps in early recognition of disease. Here we implement sensor module by making use of different types of sensorsin the systemsuch as temperature sensor, heartbeat sensor,load cell with the help of Raspberry pi. This system is very important and helpful for health supervision of animal and also by using the concept of image processing and machine learning we can predict the health and price of a cattle.

Keywords: Agriculture, Technologies, Temperature sensor, Heartbeat sensor, Load cell, Machine learning.

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PAPER ID: ICRCSIT -0326

Security Operations using Wireless Secured Communication and Tracking Device

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Abstract

Sudden attacks and inter-country wars with none prior notice may be a recurring event causing huge loss to mankind and properties.And also the very fact that modernization of our soldiers forces has been overall neglected bypast decennary. But what's not much known that the worst damage has been wiped out stonewalling modernization of the cutting-edge of the military where the conflict will mostly occur especially with waning of conventional conflicts. This doesn't only include state-of-the-art weapons firepower, night fighting, mobility and survivability but also network-centric warfare capabilities, so essential in modern-day conflict. In our proposed system,to overcome this we have designed a project called SECURITY OPERATIONS WITH WIRELESS SECURED COMMUNICATION & TRACKING DEVICE that helps to prevent such unplanned attacks. In our project using modern technology we have developed a model which keep tracks of movement of intruder and sends a message to the defense systems base station. It sends a live video through wireless which enables to pass commands easily to the machine. Just in case if any intruder is found it s automatically detected and is killed through the laser gun.The intention of this project is to scale back human victims in surprise attack.

Keywords: Surveillance, Metal Sensor, Smoke Sensor, wifi monitoring, PIR Sensor, LCD Display, IP Camera, Buzzer, KEIL.

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PAPER ID: ICRCSIT – 0327

Infusion Pump with Nebulizer Unit for Health Care

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Abstract

This project involves the designing of a medical device that supports two different drug delivery systems. One of which is liquid injection, that can be intravenous or through the digestive tract. The Second part involves another drug delivery system which helps us inject drugs into the lungs in gaseous phase. Infusion pumps are basically syringe control devices that are used for the slow injection of liquid food or drugs. The injection pump we attempt to design in this project is a simple robot that uses a motor to control the piston of the syringe with precision. In this project the nebulizer uses a piezoelectric disk that is vibrated at an ultrasonic resonating frequency that ejects the liquid into the atmosphere as very small droplets.

Keywords: Nebulizer unit, Infusion Pump, Injection, IDE

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PAPER ID: ICRSCIT - 0328

Health Monitoring and Controlling Using LoRa

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Abstract

The health monitoring and controlling is becoming very popular due to latest technologies such as M-health, Telemedicine, Portal technology, Remote Monitoring tool, wireless communication, wearable sensors such as temperature sensor, heartbeat sensors and communication devices such as LoRa, GSM(Global system for mobile), Android etc. The wearable devices that is Heart beat sensor(HB), and temperature sensor(TS) is connected to the e patient body. This devices helps when the patient pulse ,temperature will go low, then an alert message will go to the nearest hospital, family, Ambulance drivers, through the GSM. Then care takers can find the patient location through Google map. Mean while an emergency treatment is arranged for patient by physician if incase patient is having sudden heart attack or in any other emergency cases through hardware devices such as Relay, Buzzer, etc..

Keywords: Heart Rate sensor, LM35, GSM, LED, Relay, LCD, LoRa, LM35.

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Efficient Protocol Identification of MANET Cluster Head Formation and Selection Routing for Wireless Sensor Networks

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Abstract

Mobile Ad-hoc Network - (MANET) is active and a network that is self-arranging which is constructed with the gathering of several mobile nodes. A cluster is formed by a node group. In order to establish the connectivity between different nodes an efficient formation of the cluster is a necessity and to choose cluster head an algorithm is required. The nodes should communicate with each other in a short span of time. To form cluster several techniques exist. The different parameters such as speed, delay, life of the battery, delivery ratio of the packet and others are useful in implementing the algorithm effectively in wireless sensor network applications. The review paper discusses about the routing protocols and their performance analysis that are implemented by researchers and explored the gaps between them. The author proposes some of the novel methods to overcome these gaps between them.

Keywords: Wireless sensor networks, energy consumption; clustering; routing protocol; leach; Fuzzy Logic

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Comparative Analysis of Namp, Spread and Enamp Are Routing Protocols in Mobile Adhoc Netwrok

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Abstract

MANET, doesn't depend on a fixed foundation for its activity. As versatile impromptu systems are portrayed by a multi-bounce organize topology that can change habitually because of portability, productive steering conventions are expected to set up correspondence ways between hubs, without causing excessive control traffic overhead. Adhoc networks having mainly security and routing Problems. There are many routing protocols are available in MANET .In that we are going to describe about among three protocols are NAMP, SPREAD and ENAMP. With help of this protocol we are focusing on basis of recovering the link failures and reliable data delivery. Using the NS2 simulation tool we are analyzing the output. The output parameters are Packet Delivery Ratio, Delay, Packet Loss, Throughput, Time Complexity, Space Complexity, Energy Consumption and Residual Energy.

Keywords: MANET, NAMP, SPREAD and ENAMP.

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PAPER ID: ICRSCIT – 0331

A Novel Framework for Evaluation of Trust in Mobile Adhoc Networks using Flower Pollination Algorithm

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Abstract

Mobile Adhoc networks could be a range of mobile nodes distributed within the setting that would support the quality of the nodes. Because of its variable consistency behaviour, the routing path of mobile nodes wills amendment dynamically.Multiple intermediate nodes between supply and sink nodes will be involved to transfer the packets of information.In this case, there may be an opportunity for selfish nodes to drop the packets instead of transmitting them to stop spending their resources.And the selfish identification of nodes plays a crucial role in preventing the disappearance of packets.Selfish node identification is addressed during this research process to create a novel framework and safe environment for transmitting the data packets.Identification of Selfish node is focused in this research work, to get a more stable environment for disseminating of the data packets.In this paper, the selection of the optimum cluster head is done with a Multiple Constraint aware Flower Pollination Algorithm (MC-FPA). The multiple objectives like energy, bandwidth and delay metrics are considered for the selection of cluster head.In which the node is satisfied with all the metrics, the node will be selected as the cluster header.Overall the proposed study should be conducted in the NS2 simulation environment, which shows that the proposed method leads to a better result than the existing system.

Keywords: Mobile Ad Hoc Network (MANET), Trust Evaluation, Selfish Node, Multiple Constraint-Flower Pollination Algorithms (MC-FPA).

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Phishing: Awareness and Overview on Attacks

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Abstract

People across the globe use internet in many ways from social networking to online banking, this makes it rather easier for the hackers to get data in many fraudulent methods and makeuse of it for illegal purposes, one amongst the fraudulent methods is phishing. The maintopics focused here are origin of phishing, awareness activities on phishing, types of phishing attacks and a general solution to mitigate these attacks, so that user gets to know how to prevent the phishing attack.

Keywords: Phishing, Cyberattacks, Social Engineering, Phishing Attacks, Technical subterfuge.

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PAPER ID: ICRSCIT – 0333

Kavach - A Women Safety Device

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Abstract

In today's world women are less secure and have many issues regarding their security purpose. They have to undergo among various difficult situations and have to prove themselves every time in all critical conditions. So, for their security and safety purpose government has provided security through rules and regulation to the society. Although there are many existing systems for security purpose need of advanced smart security system is increased. In order to overcome such problems smart security system for women is implemented. This paper describes about safe and secured electronic system for women which comprises of an Arduino controller and sensors such as temperature LM35, flex sensor, MEMS accelerometer, pulse rate sensor, sound sensor. A buzzer, LCD, GSM and GPS are used in this project. When the women is in threat, the device senses the body parameters like heartbeat rate, change in temperature, the movement of victim by flex sensor, MEMS accelerometer and the voice of the victim is sensed by sound sensor. When the sensor crosses the threshold limit the device gets activated and traces the location of the victim using the GPS module. By using the GSM module the victim's location is sent to the registered contact number.

***Keywords*:** Women safety, An Arduinocontrollers, Flex sensor, MEMS accelerometer, GPS module, GSM module.

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A Step towards Sustainable Earth: Footprint Calculators using Python and Adobe XD

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Abstract

Identification, calculation of plastic footprint using a calculator followed by self-assessment and an action plan on a planner enabling the user to reduce his/ her contribution towards plastic footprint on the earth is an idea proposed to reduce the ecological deficit on earth. Using a mobile application to create self-awareness and to sketch an action plan helps in cutting down the usage of plastic by an individual. This in turn leads to the collection of a database related to geographical zones that enables us to identify and categorize different zones into Green Plastic Usage Zone (Within ideal limits of plastic usage by the residents), Orange Plastic Usage Zone (on the threshold outside green zone) and Red Plastic Usage Zone (seriously high usage of plastic by the residents of the zone) thereby enabling governmental intervention under environmental experts' supervision toward conversion of all zones into GPUZs (Green Plastic Usage Zones). Furthermore, using data science tools to compare and contrast successive results in the trial conversions of zones helps in drafting and implementing environmental laws that refrain individuals from contributing consciously or unconsciously to ecological deficit. The entire idea is backed by thrives with technology at its heart moving from individual to community in the creation of a sustainable earth free from any deficit.

Keywords: Ecological Deficit; Plastic Footprint; Footprint calculator; Footprint Planner; Mobile App

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Big Data: Almost Everywhere - A survey

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Abstract

The main aim of this paper is to make people familiar that whatever they do on social media platform, all that actions becomes responsible for the production of big data. Paper will relate big data with the social media platforms that we are using on daily basis. This paper wills insight what is big data, how it manage huge amount of data that data produced by no of users all over the word. The users that produce such data may or may not know about big data technology. This paper will try to introduce concept of big data technology among the users, who are participating in production of big data.

Keywords: Facebook, linkdin, twitter, whatsapp, telegram, Instagram, Big data, RDBMS, big data Analytics.

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Identification and Detection of Fraud Mobile App in Mobile App Market

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Abstract

In Mobile App Market, Downloading fraud mobile app is a typical hazard. An individual who foul up thing control either diminished or expanded the quantity of downloads of Apps through an assortment of deceiving approaches. We realize that the most noteworthy raked application is downloaded often. Various clients of portable application market can download this faked application and further may opportunities to misdirect proposal and search calculations and in future lead to terrible client involvement with App markets. In this research we have created a mobile app market like Google play store through web application and demonstrate how fake rating is to be given in mobile app, how fake mobile app is identify and detect to avoid such fraud mobile app so the use may not face bad experiences.

In this research we are ranking the app in three different ways ranking, rating and review for detecting fraud by analyzing this three evidences. For fraud detection we have used a method to join theses three ranking, rating and review together all and find the sum of this called an evidence aggregation method. In the experiments, we validate the effectiveness of the proposed system, and show the scalability of the detection algorithm of ranking fraud activities.

Keywords—Google Play store, web application, Mobile Apps, Data mining, Evidence Aggregation, Review, Rating, Ranking , Ranking Fraud Detection and information security.

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A Proposed model of Computation Offloading in Fog Environment

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Abstract

With the ubiquitous use of connected devices, a huge amount of data is generated everywhere, all these data need to be analyzed for different purposes. The data generated may be from complex machines, social media, hashing patterns, environmental changes, and life sciences, it can be of high magnitude, great security, and time-critical purposes, these all requirements can be catered through computation offloading.It is a novel area of distributed computing, where a resource constraint device uses a robust platform to execute the task. The onus to offload may depend upon the capability of a host device to execute or not to, based on the parameters it uses to decide for local or remote execution of a task. The host device can offload partially, fully, or a part of computational data.

Keywords: Computational data, offloading, ubiquitous and distributed computing

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PAPER ID: ICRCSIT-0339

Skin Disease Identification Using Yolo

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Abstract

Skin disease is the most common health problem worldwide. Human skin is one of the difficult areas to detect. This difficulty is due to rough areas, irregular skin tones, and various factors like burns, moles. We have to identify the diseases excluding these factors. In a developing country like India, it is expensive for a large number of people to go to the dermatologist for their skin disease problem. Every year a large number of the population in developing countries like India suffer due to different types of skin diseases. So the need for automatic skin disease prediction is increasing for the patients and as well as the dermatologist.

In this project, a method is proposed that uses computer vision-based techniques to detect various kinds of dermatological skin diseases. This recognition system is built using YOLO object detection algorithm, considering three categories of skin diseases - Psoriasis, Rosacea and Melanoma.

Keywords: Skin diseases; convolutional neural networks (CNN); object detection; you only look once (YOLO)

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PAPER ID: ICRCSIT-0340

A Paper on Impact of Big Data on Awareness of Corona Virus

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Abstract

As on today there is no proper medicine or vaccine for Corona virus which causes illness having the symptoms like cold, cough and more oftenly the patient have little fever also as like in Middle East Repository Syndrome (MARS) and Severe Acute Respiratory Syndrome (SARS) spread almost across the world till now 203 countries may effected with this virus. This Virus is identified in humans in Wuhan, China in late 2019 .CORONA Virus generally termed as COVID19 is generally a virus spreading in three different ways that is identified in a human, spreading over people's direct interaction and final stage is community spread. This paper represents how the people are affected and how we can use technology like big data and some other latest topics of Artificial Intelligence and Machine Learning to find the solution for COVID19 and suggests some idea about the spread of the disease and given the measures to control the virus spread.

Keywords: *CORONA Virus,COVID19, Big Data*

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PAPER ID: ICRCSIT-0341

Any Time Medicine Vending Machine using Embedded Systems

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Abstract

All Time medication (ATM) may be a machine that delivers the drugsthe medication} in emergency cases and guarantee availableness of basic drugs 24x7 and thus the name "All Time Medicine".ATM is put in in highways, remote areas, rural areas and places wherever medical stores don't seem to be inside the reach time.This project consists of LPC 2148 small controller that controls the opposite sub systems like RFID Reader, world System for Mobile communication (GSM), medication dispenser, internal control.

Keywords: Dispenser, Medicines, ARM LPC2148, RadioFrequency Identification (RFID) Reader, 4*4 Keypad, Liquid Crystal Display (LCD)16*2, IR Sensor, Relays, Global System for Mobile communication (GSM).

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PAPER ID: ICRCSIT-0342

Breast Cancer Detection using Probabilistic Neural Network

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Abstract

Breast tumor growth is the world's 2nd utmost happening diseases in a wide range of cancer growth. The most well-known malignancy among ladies overall is breast disease. There is steadily a requirement for progression when it includes clinical imaging. The Initial location of cancer growth followed by correct treatment will lessen the peril of death. Deep learning can assist clinical experts with identifying the ailment with more exactness. Where neural [7] systems are one unique procedures which can be utilized for the arrangement of normal and anomalous breast recognition. PNN will be utilized for this identification of tumor. Mammographic images are used consequently, encouraging preliminary outcomes have been gotten which depict the ampleness of deep learning for breast malignancy cancer growth identification in mammographic images and further energize the utilization of deep learning based current segment extraction and request systems in various clinical imaging utilizes especially in breast tumor area.

This is progressing research and further improvements are beings made by enhancing thee PNN design & further more utilizing preprocessed systems which will ideally prompt higher exactness measuress. Legitimate division is compulsory for effective element extraction & characterization.

Keywords: probabilistic neural network; mammogram; mass detection; deep learning

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PAPER ID: ICRCSIT-0343

Deep Learning Model for Detection of Glaucoma using Fundus Images

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Abstract

Glaucoma is an eye malady that harms eye's optical nerve. Glaucoma is likewise viewed as one of the principle purpose behind visual incapacity on the planet since it is an irreversible neuro-degenerative eye malady. Without appropriate treatment it might cause absolutely changeless visual impairment inside a couple of years. Glaucoma is otherwise called quiet cheat of sight, this quiet criminal of sight is principally portrayed by optic nerve fiber misfortune and that is set apart by expanded intraocular pressure (IOP) and additionally loss of blood stream to the optic nerve. The extended intraocular pressure, can hurt optic nerve, which transmits pictures to your cerebrum. In case the damage continues with it prompts invariable vision incident.As glaucoma shows no side effects, early recognition and treatment are essential to forestall vision misfortune.

In this paper we are going to actualizing Deep learning models with CNN (Convolutional Neural Network) for programmed recognition of glaucoma utilizing fundus pictures. We are utilizing VGG16 (Visual Geometry Group) to make a dataset by utilizing an ImageNet. By utilizing VGG16 model fabricated utilizing CNN, we can easily separate among glaucoma and non-glaucoma. The outcomes show that the model can recognize glaucoma with a accuracy precision of 0.997. The outcome recommends that utilizing an ImageNet-VGG model is a strong for programmed glaucoma screening framework.

Keywords: Glaucoma, VGG16, Fundus images, Deep learning, CNN.

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PAPER ID: ICRCSIT-0344

Automatic Detection of Glaucoma using Matlab Standalone Application

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Abstract

Glaucoma is one of the major causes of blindness, About 79 million in the world likely to be afflicted with glaucoma by the year 2020.For this reason, there has been a significant advance in automatic screening tools for early detection. Glaucoma often has no symptoms at an early stage, but it can cause sudden vision loss. It mainly caused due to high pressure inside the eye, since glaucoma does not show early symptoms, hence it cannot be easily diagnosed by the doctor. Hence through these new detection techniques, doctors can easily identify patient's condition and carryout the necessary treatment. This proposed method addresses the automatic detection of glaucoma in colored retinal fundus images using the Matlab App Designer Application. The retinal image can be diagnosed by the key image processing techniques like Enhancement, Thresholding, Erosion, and Segmentation. Based on the cup to disk ratio [CDR] value, glaucoma is detected and displayed in the Matlab App Designer that actsas a Standalone Application.

Keywords: Glaucoma, CDR, GUI, Matlab App Designer, Standalone Application

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Machine Learning for the Detection of Diabetic Retinopathy

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Abstract

In this paper, an innovative technique is offered built on pre-examined entirely convolutional neural network (CNN) over and done with transfer learning. The proposed method utilizes the effective learning from recent deep CNN models with use of classifier at the end. Meanwhile, additional retinal image pre-processing technique is applied for the better classification results. The improved result has contributed to the area of computer aided diagnosis for retinal screening system. Extensive experiments have been conducted on Messidor and IDRiD database with desired obtained accuracy of 96.29 % and 94.82 %. The proposed method supports retinal disease screening effectively by deep learning methods.

Keywords: convolutional neural network, CNN Models and classifier.

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Smart Village as a Model for Swachh Bharat Based on Embedded IoT

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Abstract

The design of internet of things (IoT) is one of the time ahead possibility of technology. The rationale behind it working is the amalgamation of web, mobile and Information and Communication technology. It allows different devices in an arrangement to pass on the information with each other to perform their job in an effective way. The raising population of the world make it necessary to facilitate the cities and villages to function in a smart way. In a country like India, where majority of population lives in villages, huge reports have been made to automate tumbersome and munbane task in cities home and office. Though, little have been executed in villages where IoT could play a important role in bringing 'smartness' to the village activities.

Keywords: Smart Waste Management system, Smart Street light monitoring system, Smart Water management system and Gas leakage system.

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Unusual Human Activity Analysis by using Image Processing

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Abstract

As of late we run over burglary, robbery and assaults on ATM. The cameras that are utilized in ATM is chiefly utilized for recording and the recorded information will be put away in it.In numerous cases it become hard to explore and follow the cases. In our proposed framework we can distinguish whether the occasion occurring inside the ATM is common or strange occasion by the utilization of camera that is fitted inside the ATM. The occasions are supposed to be Unusual occasions if the individual's face is covered by protective cap or material, if individual attempts to veil the ATM's camera, stuff inside the ATM or anybattleoccurringinsideATM, all these bizarreoccasions can be identified in the low-resolution video by methods for foundation deduction strategy. At whatever point an uncommon occasion is identified inside the ATM, the bell will be ON and sends the alarm message to the approved individual through GSM module. This is adequate in light of the fact that it utilizes low goals outlines and sends ready message to the experts for upgrading ATM security and even the counteraction of robberies by utilizing low resolutioncamera.

Keywords: ATM, GSM Modules and Robberies.

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Server Less Architecture with Cloud Computing for Today's Digital Enterprise

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Abstract

A server less architecture is a way to build and run applications and services without having to manage infrastructure. Your application still runs on servers, but all the server management is done by AWS. You no longer have to provision, scale, and maintain servers to run your applications, databases, and storage systems. Cloud computing has enabled organizations to focus less on their IT infrastructure and more on their core products and services. In fact, the cloud is no longer viewed as an alternative to hosting infrastructure: In today's world, all kinds of businesses are using cloud services without having to worry about any underlying infrastructure issues. This new consumption model has evolved to serverless architecture. By adopting serverless architectures, customers can re-imagine their next-generation products from ideation to production, without waiting for, or worrying about, infrastructure. The benefits are significant, generating efficiencies, lowering costs, and speeding time to market.

Keywords: serverless, architecture, infrastructure.

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Unusual Human Activity Analysis by using Image Processing

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Abstract

The cloud storage systems are becoming more popular and all the organizations are moving towards the direction of cloud for storing the data. Moving all the data in one cloud causes problems like vendor lock-in, increased service costs, and data availability. In this paper, we are introducing the DCStore, a cloud-of-clouds storage services designed for an organization to outsource their data into the clouds. In order to overcome the above mentioned problems we combine three key techniques .First, DCStore will remove all the redundant data at the client-side to save storage using via application-aware chunking method. Second, in order to achieve high availability of data DCStore uses an inner-chunk based erasure coding scheme which distributes unique chunks across multiple clouds. Finally, a Container-based share management strategy is used for optimizing the performance. Additionally, the MD5 algorithm is proposed for digital signature applications, where a large file must be "compressed" in a secure manner before being encrypted with a private key under a public-key cryptosystem. Map Reduce technique is used to avoid network traffic and is a parallel processing framework widely used in big data processing in recent years with strengths such as simple operation, high fault tolerance, and high scalability. Therefore, our experimental evaluations can improve performance, storage space and can achieve high availability of data.

Keywords: Message Digest, Fault tolerance and scalability.

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PAPER ID: ICRCSIT-0353

Women protecting system with GPS Tracking and Alerts

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Abstract

In light of the present situation of the metro cities and other big cities, women security has emerged as one of the most important requirements in our country. In this world of advanced technology and smart electronics it is required to have a simple and cost-effective safety gadget that helps the victims during unforeseen dangers. Women safety is a very important issue due to rising crimes against women these days. To help resolve this issue we propose a GPS based women safety system that has dual security feature. This device consists of a system that ensures dual alerts in case a woman is harassed or she thinks she is in trouble. This system can be turned on by a woman in case she even thinks she would be in trouble. It is useful because once an incident occurs with a woman she may or may not get the chance to press the emergency button. In a button press alerting system, in case a woman is hit on the head from behind, she may never get the chance to press panic button and no one will know she is in trouble. Our system solves this problem. This device is to be turned on in advance by a woman in case she is walking on a lonely road or some dark alley or any remote area. Only the woman authenticated to the devices can start the system by fingerprint scan. Once started the devices requires the woman to constantly scan her finger on the system every 1 minute, else the system now sends her location to the authorized personnel number through SMS message as a security measure and also sounds a buzzer continuously so that nearby people may realize the situation. In this case even if someone hits the woman or the woman falls down and get unconscious, she does not need to do anything, the system does not get her finger scan in 1minute and it automatically starts the dual security feature. This device will prove to be very useful in saving lives as well as preventing atrocities against women. The device uses GPS sensor along with a GSM modern, LCD display, LEDs and Microcontroller based circuit to achieve this system.

Keywords: NodeMCU, Buzzer, LCD display, Fingerprint

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Virtual Mouse Implementation using Open CV

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Abstract

This paper proposes a novel camera vision based cursor control system, using hand gestures captured from a webcam through a color detection technique. The system will allow the user to navigate the computer cursor using their hand bearing color caps or tapes and left click and dragging will be performed using different hand gestures. And also it performs file transfer between two systems in a single same network. The proposed system uses nothing more than a low resolution webcam that acts as a sensor and it is able to track the users hand bearing color caps in two dimensions. The system will be implemented using the python and OpenCV. The hand gesture is the most effortless and natural way of communication. The output of the camera will be displayed on the monitor. Shape and position information about the gesture will be gathered using detection of color. The file transferring scheme is implemented by using the python server programming.

Keywords: Virtual Mouse, Hand Gestures, Image capture, Processing, Masking, DnD Frame

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PAPER ID: ICRCSIT-0356

Crime against Women Analysis and Prediction in India using - R Programming

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Abstract

Crime against women or violence against women is the major issue of any country, state or district. There is a need to extract relevant and timely information so that the issue can be controlled. Crime analysis is defined by exploring and detecting crime and their relationship between various criminals and crime heads. There are various data analysis and prediction techniques developed and using in the different areas. Many researchers are using various kinds of techniques of data analysis to prevent and control the crime. This paper presents the statistical analyses of such offences happened in India by analyzing different data sets available using R-Programming. Also, made crime rate predictions for the year 2020-2021 from these analyses reports.

Keywords: R-programming, rapes, molestations, litigation, rambling, robust, Data Science, NCRB.

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A Survey on Amazon Fine Food Reviews

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Abstract

Sentiment analysis or opinion mining is the machine study of people's opinions, sentiments, attitudes, and emotions expressed in communication. It is one in all the foremost active analysis areas in Natural language processing and text mining in recent years. Its popularity is mainly due to two reasons. First, it has a wide range of applications because opinions are central to almost all human activities and are key influencers for any business. Second, it presents several difficult analysis issues, which had never been attempted before the year 2000. Part of the explanation for the dearth of study before was that there was very little narrow-minded text in digital forms. It is so no surprise that the origination and therefore the zoom of the sphere coincide with those of the social media on the net. In fact, the analysis has conjointly unfolded outside of engineering to management sciences and social sciences because of its importance to business and society as an entire. This paper presents the mainstream sentiment analysis then move on to describe some recent work on modeling comments, discussions, and debates.

Keywords: Object detection; convolution neural network, scoring system; selective search; deep learning.

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Study on Impact of Teen Births on the Female Employment and Literacy Rate

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Abstract

Teenage pregnancy is when young women who have not attained lawful adulthood getting pregnant. Centers for Disease Control and Prevention (CDC) did a study stating that in 2017 around 194000 babies were born to American girls between the ages of 15-20. It was noted that in teen pregnancy the women have to rely on benefits at one point in their lives. This can also affect their education where they might have to discontinue their education. Areas having a lower literacy rate show a hike in teen pregnancy rates where either of them has little knowledge about the consequences of unsafe sex. Since we all know that teen pregnancy is a great risk to both the parent and infant. Premature and low birth weight in terms of infants, parental care, health issues and other social issues for teens. In non-technical language, greater the literacy rate better is the job and disturbance in the learning process can cease from getting a well-paid job. There are scenarios where teen moms have a great difficulty-working while pregnant like picking up simple jobs in retail shops where one has to stand for long hours. The aim of the paper is to analyze how teen pregnancy can alter female employment status and education and provide various prevention methods for the same.

Keywords: Teen birth, Female employment, Literacy rate, Education, wages

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Generating Qualitative Rating for user Reviews Using Sentiment Analysis

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Abstract

A customer seeks to purchase an item online, browses different e-commerce websites for finding the general ratings of the item to settle on a choice. Any products rating on an e-commerce website is determined by finding the average of all customer ratings on that particular website. This paper proposes a technique to ascertain the general rating of an item by taking reviews from all web-based business sites of that specific item and using Natural Language Processing and Sentiment Analysis to create a consolidated rating for it so that it becomes feasible to find the rating for a product on a single website. The implementation uses Machine Learning techniques to find the accuracy of the model that generates rating using Compound Score method.

Keywords: Natural Language Processing, Machine learning

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PAPER ID: ICRCSIT-0364

Lane Detection Using OpenCV

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Abstract

Autonomous Driving Cars are going to be the future one day or the other and they are one of the most disruptive innovations in AI. They are dependent on Deep Learning algorithms, that continuously drive our society forward and create new opportunities in the mobility sector. An autonomous car can go anywhere a traditional car can go and does all the tasks that an experienced human driver does without the involvement of humans. It is very essential for the training to be done properly as the surroundings must be understood like how human drivers understand. Based on the problems encountered in detecting objects by autonomous vehicles, OpenCV library is used for lane detection. The reason for choosing grayscale instead of color, selecting region of interest, applying Hough Transform has been discussed.

***Keywords*:** Numpy, OpenCV, Canny, Lane-Detection, Hough Transform

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PAPER ID: ICRCSIT-0366

Angle Closure Approach for Glaucoma Detection using AS-OCT Images

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Abstract

High-definition Anterior Segment OCT (AS-OCT) is an emerging non-invasive, high-speed, and high-resolution imaging modality for the anterior segment of the eye. During this paper, an automatic system supported deep texture AS-OCT images in angle-closure detection for learning is proposed. Introduce a completely unique approach for Angle-closure detection that extracts deep texture features from images by integrating the LBP descriptor to a Multi-level convolutional neural network. Here, three parallel sub networks are apply to extract AS-OCT the global image for delineation and clinically suitable local areas. Finally, the extracted deep texture features of those sub networks are integrated into one fully connected layer to seek out the effect of angle-closure identification. Within the experiments, the proposed method overrides previous identification methods in deep learning systems with different clinical AS-OCT datasets.

Keywords: AS-OCT, sliding-window regression, LBP Convolution

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An Overview of the Smart Cities Mission in India

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Abstract

Since the concept of Smart City Mission has been introduced in India, IoT(Internet of Things) becomes the key and major factor in achieving the mission. As of now there are no such technological illustrations which can depict that currently IoT has helped the cities develop in terms of the management and development of smart cities in India. Therefore, the current study describes the importance of IoT technologies on the technology roadmap (TRM) of a smart city in India. The survey consists of the problems which are happening in India due to Urbanization, the importance and essentiality of detail components of IoT technologies for a smart city and also the initiatives took by the government to incorporate the smart city mission in India through the National level smart city challenge which was accepted by the states of India. Based on these survey and initiatives took by the government the possible list of IoT based technologies which can be incorporated in India for the successful developments of the smart city mission is been presented.

Keywords: IoT (Internet of Things), Mission, Smart City, Technology.

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Mitigate the Effect of Different Turbulence for Free Space Optical Communication

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Abstract

This paper discuss the enhanced performance of polerization shift keying which is totally depend on different path followed while travelling from transmitter to receiver in free space optical system just because in the atmosphere there are lot of atmospheric turbulence which creates fading in the channel. There is exactly closely related derivation of the two end output possibility of the system. And final output will compare with the amplitude shift keying and direct transmission. The final output shows the execution of a relay aid FSO system which is far better then the directly transmitted signal.

Keyword - Free space optics, Polarization shift keying ,Strong atmospheric turbulence, Parallel relay Outage probability, Bit error rate

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Design and Analysis a Suitable Ring WDM System for Enhancing the Signal Characteristics

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Abstract

The proposed 160km WDM ring topology system is used in a suitable manner to enhance the characteristics of the signal traveling in the optical fiber. The NRZ type of signal used in the processing gives a fine idea of the better efficiency of the data transfer between the sender and the receiver. By using the WDM add and drop multiplexer, SOA amplifier and many other components, which will give a different approach to make the present transmission system better. Also using the combination of the different topology, we can make a hybrid system for better results. System made more efficient with less cost for communication by using the same available limited resources. By using this proposed project, the no. of user in a ring topology can be increased efficiently for future communication network.

Keywords **-** optical phase conjugation (OPC), Modified star-ring architecture (MSRA), optical beat interference (OBI), differential quadrature phase-shift keying (DQPSK)

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Age Invariant Face Recognition for user Authentication by Updating Corpus using ANN and Genetic Algorithm

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Abstract

Face recognition has been growing rapidly and is a field challenge for real-time application. Many research activities are conducted in the area of facial recognition for aging and disorders. This paper presents a novel approach to optimize the corpus automatically. The proposed work consists of two major stages of validation and rehabilitation. In the process of validating an anonymous image with different ages of the human face taken and the amount of feature extracted, these extracted items were compared to a large animation of the human face. If the feature is the same as the corpus, then to support the process of updating the features extracted from an unknown image are normalized with the feature already stored in the corpus and then stored back in the corpus. The reconstruction process had excellent simulation using a genetic algorithm. In this regard the algorithms called GABAOT (genetic Algorithms based Automatic Optimization Technique) are suggested in the present paper. The algorithm is tested with the 10th article of different age in the present work. A thorough discussion has been made in the present paper and the proposed algorithms for automatic corpus reconstruction. The result was found to be very satisfactory.

Keywords: Artificial Neural Network (ANN), Genetic Algorithms (GA), Optimization Techniques, Ageing.

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Detection and Prediction of Infectious Disease through IoT Sensors

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Abstract

Medical or healthcare is one of the world major challenges and estimates that about 20-30 billion people worldwide suffer from various diseases such as arthritis, asthma, cancer, COPD, diabetes, and elderly care heart attack detection, activity and movement recognition in the elderly. Over the past few years, we have witnessed the development of the Internet of Things (IoT) and have continued to grow in the healthcare field. The development of the Internet of Things provides a platform that allows millions of people to regularly access medical or health-related updates for a smarter and health daily life. The Internet of Things has evolved over the past few years and has evolved in every field, including home, industry, medical or healthcare, defense, automotive, education and more. The Internet of Things has evolved in a variety of applications, including and healthcare. This technology helps patients and doctors accurately predict different diseases and make diagnoses based on the results. An important aspect of the survey is how to process and classify the data collected by sensors supported devices in the Internet of Things medical environment or medical environment. This research report is a recent review of various classification algorithms SVM, Naïve Byes, Decision Tree, KNN etc. They were used to classify data collected from sensor-enabled devices in IoT healthcare or healthcare environments Provide. This study briefly reviewed how the Internet of Things can contribute to the medical field by using various sensors and communication protocols. This article also outlines the classification algorithm parameters used to classify medical data, such as accuracy, true positive rate (TPR), accuracy, and false positive rate (FPR) use to classify the healthcare.

Keywords— Internet of things, healthcare, sensor-compatible devices, medical environment, SVM, Naïve Byes, Decision Tree, KNN

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Energy Monitoring and Analysis using IOT

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Abstract

This project describes the digitization of load energy usage readings over the internet. The proposed system design eliminates the involvement of human in electricity maintenance. The user can monitor energy consumption in watts from an Application. The Application utilizes the analytics to analyze the energy usage to give more detailed description and visualization of the energy usage statistics. Wi-Fi module performs IOT operation by sending energy data of the load to the Application which can be accessed through the device. In the proposed system, consumer can do power management by knowing energy usage time to time. This proposed system utilizes an Atmega microcontroller. The unit which is generated can be displayed on the android application.

Keywords: Internet of Things (IoT); Arduino nano, ESP8266,Wi-Fi – Wireless Fidelity Current sensor SCT-013-030, Integrated Development Environment(IDE), HEMS (Home Energy Monitoring System).

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A New Mechanism to Improvement of Voice Quality and System Speed in Communication System

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Abstract

Poor voice quality in VoIP models during correspondence has been a typical event which VoIP clients experience, this can be baffling when clients can't impart proficiently. The vast majority think that its hard to think straight when they make calls and there is a reverberation. Notwithstanding this dissatisfaction, the guest's cash, time, exertion, vitality is totally squandered without remuneration of any sort. Clients are additionally baffled by not getting, transmitting or misjudging voice messages effectively. Given the requirement for voice quality in calls, it is of no significance when there is no appropriate correspondence. This examination means to lessen the danger of terrible calls and improve the nature of voice calls. In any case, we have to raise the channel length to a high incentive in some genuine telecom's surroundings with long reverberation delays. However, in view of high computational multifaceted nature, it isn't proficient in productivity. In this investigation, we propose an answer that utilizes a computational recipe to remunerate long reverberation, delay, parcel misfortune, jitter and commotion. The model planned was created utilizing MATLAB 2019b. This methodology exhibited profitability as far as both voice quality and framework speed.

Keywords: Communication, Call Quality; Model; Switching and Voice.

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Recognition of Malignant section of Diseased Images using Thermal Image Processing

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Abstract

In medical science, abnormal growth of any cell is called cancer. Malignant region is nothing but the location of extra growth of any cell in the body. In this paper, we make attention on the different types of malignant region detection techniques using Thermal Infrared Images. We studied various imaging methods like thermal imaging, x- ray, magnetic resonance imaging (MRI), optical imaging of abnormal cell in human body. It is analyzed that malignant regions of body helps to prove the cancer cells those are present within the body. The early detection of malignant region helps in saving the life of an individual. To obtain thermal images, a thermal camera is used which can detect temperature variations in the body, as low as 0.1°C. Thermal cameras capture the surface skin temperature which can vary due to emotion-specific, bio-physiological states in the human body.

Keywords: Medical Imaging, Malignant region, Thermal Imaging, Cancer Biomedical

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PAPER ID: ICRCSIT- 0375

Extraction and Reading of Line Word Character Segments Directly from Printed Text Document

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Abstract

Approximately there are 40 million people who aresuffering from blindness across the world in which 15 millionpeople are from India which shows India has largest populationwho are visually impaired.Proposed system interpolates an effective and worthwhile technique which allows the user to contents present in the image.This paper integrates the notion of Optical Character Recognition (OCR) and Text to Speech Synthesis(TTS).This system permits visually impaired people to interact with computers via vocal interface.The purpose of the proposed method is to embrace the system that extracts text data from the images by methods like global thresholding, horizontal splitting and linearsmoothing filter and finally the extracted text will be converted to speech by the usage of Text to Speech synthesis(TTS).

Keywords: Optical character recognition (OCR), Text-to-Speech (TTS).

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Light Travel

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Abstract

This is about light travelling. In this we use light as a source of travelling. Here the phenomenon used in building this project is photo electric effect.

Keywords: Photo Electric Effect, Light Travelling

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Implementation and Comparative Analysis of Classification Algorithms for Early Detection and Prediction of Cardiovascular Disease

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Abstract

Cardio vascular disease is the most well-known cause of death worldwide. The main grounds of increasing mortality rate due to cardio vascular disease are because either shortage of doctors or patients beingignorant of the disease having reached the extreme stage. It is a strategic approach to take advantage of large volumes of available Cardio-related data for prediction and Machine Learning Algorithms can be used for predicting chances of heart disease occurrence. The datasets used are classified in terms of nine medical parameters. In this paper, numerous algorithms and techniques are discussed that are used in prediction of Cardio Vascular Diseases. This paper also concentrates on comparing the accuracies of various classification algorithms namely, K-Nearest Neighbor, Support Vector Machine, Naïve Bayes, Random Forest, Linear Regression, Decision Tree and XGBoost. By using machine learning algorithms, it provides various ways for the prediction of the heart disease. Factors like Heart rate, Serum cholesterol and Blood Pressure are streamed from the sensor. Remaining parameters are fed manually through the GUI. Random Forest algorithm, being proven the most accurate algorithm through our analysis, considers all these parameters and predicts whether a person is suffering from heart disease or not, in stages.

Keywords: Machine Learning, K-Nearest Neighbor, Support Vector Machine, Naïve Bayes, Random Forest, Linear Regression, Decision Tree, XGBoost, Heart Rate sensor, Blood Pressure sensor, Cholesterol device.

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Analysis on Securing Data in Cloud

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Abstract

Most current security solutions are supported by perimeter security. However, cloud computing breaks organization parameters. When data resides within the cloud, they reside outside the organizational bounds. This leads users to a poorly controlled awareness and poses rational security concerns that hamper cloud computing adoption. Moving data to the cloud usually implies counting on the Cloud Service Provider (CSP) for data protection. Encryption is that the most generally used method to shield data within the cloud, it avoids undesired accesses. This initiative provides an information-centered access control resolution of more articulate role-based enrichment in which protection is optimized to secure consumer data irrespective of the cloud service provider that owns it. Novel identity-based mostly and proxy re-encryption techniques are wont to shield the authorization model. Data is encrypted and authorization rules are cryptographically secured to maintain user information from access or abuse by the service provider. The authorization model offers the help of function hierarchy and resource hierarchy with a high expressiveness. A symbol of concept implementation has been developed and a working prototypical deployment of the proposal has been integrated inside Google services.

Keywords: Securing data, Cloud Service and Google Service.

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Fault Detection and Monitoring of Solar PV Panels using IoT

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Abstract

The most widely available energy throughout the world is solar energy. To minimize the dependence on energy imports, the proper maintenance of solar panel is required. The power generated by the solar panel has to be monitored continuously. Using Internet of Things technology, the power generation can be greatly influenced by means of its performance, monitoring and maintenance. The present paper is based on the implementation of Internet of Things (IoT) monitoring of solar panel for maintenance and for improving the efficiency by detecting the fault. This project is very useful for maintaining maximum power output from the Solar panel through Internet of Things. The overall project is very useful in major solar power fields as maintenance of individual solar panels would be very difficult, across the thousands of solar panels. Major asset of this project is its application in real time solar farms.

Keywords : solar panel, Internet of Things; Wi-fimodule ; node MCU; thingspeak ; microcontroller

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Applications of Chaotic Maps in Image Encryption for Securing WSN

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Abstract

With the continuous advancement in the field of internet of things (IOT), usage of wireless sensor networks (WSN) is increasing in healthcare applications. As in the wireless sensor networks (WSN) exchange of information is done by using wireless network, it is possible that sensitive information can be steeled by person with malicious intent. Therefore information exchange is vulnerable to security threats that can affect the performance. The challenging task of securing information can be achieved by using encryption methods. Chaos based encryption schemes provide better security for information exchange as compared to conventional methods. We have studied various chaotic map based image encryption. It is found that linear chaotic map encryption is easier to implement as compared to hyper chaotic map, but are vulnerable to various types of attacks. While hyper chaotic map based encryption are complex but provides better security.

KeyWords: WSN, IOT, Security concerns, Image encryption, Chaotic maps

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Age and Gender Prediction Using Deep Learning Techniques

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Abstract

Face analysisis one of the most studied research topics in the field of computer vision and pattern recognition for the past few decades.It has attracted much attention because of providing better security than conventional approaches. It has pulled in much consideration due to giving preferred security over customary methodologies. Performance of existing methods on real-world images is still significantly lacking, especially when compared to the tremendous leaps in performance recently reported for the related task of face recognition.Many methods have been proposed in the literature for age estimation and gender classification. Age and gender prediction plays a major role incriminal identification and other security applications.

Keywords: Face recoginition, security applications and incriminal identification

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An IoT Based System to Monitor Soil, Water and Air Quality for Better Living

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Abstract

Water, air, and soil are three natural resources that living beings cannot survive without. An extensive increase in the industrial output, shift from rural to urban and over consumption of land and sea resources had lead to a massive depletion in the quality of soil, water and air quality. Internet of Things (IoT) techniques is found to be used in wide variety of applications such as research fields for gathering, monitoring and examination of data from all locations. It can be used to implement this system where the quality of these three entities (Soil, Water and Air) can be checked to see if it is suitable for use with the help of different sensors connected to a Raspberry Pi board. The proposed system is implemented to collect the values from the sensors and to analyze these values for further action. In view of this, a threshold value is chosen by considering various factors and is set for various factors (pH, Temperature, Humidity, Moisture, Turbidity and Gas). This system monitors a specific region; collected data is sent over Internet securely and proposes further action if these values exceed the threshold value.

Keywords: IOT, Turbidity, Monitor soil and Air.

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Wink to Communicate and Feelings for Music Application for Paralyzed Using Computer Vision

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Abstract

There are a number of diseases and disabilities for humans worldwide. One of them is paralysis, which makes the person lose his/her control on their muscles. It is quite hard for them to perform certain basic tasks such as walking as well. Some of their basic problems always need to be addressed and therefore few applications can be built for them which helps them in their daily routines. There are again different categories under the patients affected by paralysis which include Locked-In Syndrome who have their thoughts or information trapped in their mind and are unable to communicate because they only have the ability to control their eyes and no other part of the body. The patients affected by Amyotrophic Lateral Sclerosis (ALS) and Tetraplegia have lost the use of all four limbs and torso. They can only use their head for showing emotions or for communication but they cannot perform other tasks and are immobile. Therefore, an application for communication by using only the eye blinks is built for the paralysis affected patients. Another interface is implemented to help Tetraplegia and ALS affected patients to provide entertainment by playing music based on the current mood of the patient that is identified. The application will be useful in serving the patients with some emergency situations where the patient needs to call their caretaker.

Keywords: Amyotrophic Lateral Sclerosis, Disabilities, Emotions, Eye blinks, Paralysis.

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Deep Learning Approach to Detect Objects using Drone Computing

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Abstract

Object detection and tracking using unmanned aerial vehicle (UAV) has been widely used in recent years. Deep learning techniques are achieving state-of-the-art results for object detection. In this project we implemented "You Only Look Once"(YOLO) algorithm of convolutional neural networks for object detection that helps in solving various kind of problems such as surveillance, search-and- rescue, shipping and delivery, traffic monitoring, Mining Detection etc. Our project achieved 80% of the accuracy using low-cost, state-of-the-art model by detecting multiple Objects within an Image.

Keywords: Mining detection, YOLO and Traffic monitoring.

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Data Mining in Retail Industry for sales behaviour prediction

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Abstract

Data mining refers to the procedure of extraction of valuable data from a pool of information. Data mining has become one of the fields have been researched very late especially with rise in advancements of technologies which caused the size of data to be reserved and processed by conclusion-based processes or query based approach to multiply by good replication steps. Data mining is otherwise called Knowledge Discovery in Databases (KDD) which empowers data investigation, facts examination, and facts visualization of enormous data stores at an elevated level of deliberation, without a particular theory at the top of the priority list. In this paper we are focused to find a proper and more relevant way to do data analysis. The algorithm proposed in this paper are classification and clustering in which classification has logistic regression, decision tree and KNN(k-nearest neighbor) method whereas clustering comprises of Centroid based, Distributive based, Connectivity based and Density based clustering. All these methods are used to find best way for selecting best way for data mining.

Keywords: *Knowledge Discovery, Market Basket Analysis, Customer Relationship Management (CRM)*

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Security System for DNS using Cryptography

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Abstract

Domain Name System is considered as a protocol which is designed to converts Hostnames into IP Addresses in excess of a connected Network. Domain Name System is basically an open source, and which has minimal security measures also the main problem encountered is that it cannot determine that weather the provided Domain name is from authorized source or not so these backend threats or vulnerabilities will not cause any unauthorized access to the Attacker and avoid different types of attacks such as IP Spoofing, DNS Spoofing etc. so to Secure the DNS best method is to assign Digital Signatures to Authenticate the Domain owner using their Hash Values with some set of keys. This Paper successfully presents the methodologies to secure DNS using Digital signature and Hash Values which will be further verified at receivers end by using private key With the aim of successfully securing it various algorithms Like Message Digest, RSA, DSA is involved. This will surely give good security to DNS.

Keywords: Digital Signature, Message Digest , Cryptography , Hashing

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Identification of Different Plants through Image Processing using Different Machine Learning Algorithm

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Abstract

Identification of plants through plant leaves on the basis of their shape, color and texture features using digital image processing techniques for classifying the plants species using different machine learning algorithms.This project includes reviewing multiple image processing methods to use machine learning to identify multiple plant using its leave feature in form of image. Now the image processing technique is considered as a main method for classifying different plants of different characteristic or specific portion or region of the plant leave which will be then identified through image processing. This thesis only focuses on the identification and classification of different parts of leave to identify the plants species. In this article offers an overview of the various classification methods used in the classification of plants leaf identification. Throughout the project SVM is the main method or algorithm that we are using for identification or classification of a plants. This project also focus on Image Acquisition, Image pre-processing, image segmentation, feature extraction. Other technique that runs these methods smoothly is Gaussian Filtering technique, K-means Clustering technique, Principle Components Analysis (PCA). The first part of the proposed plant identify the system is the process of training. In this, the images of the plants are obtained using a digital camera. Then the image preprocessing techniques are applied to these images. After preprocessing, useful image features are extracted using feature extraction technique that will be used as training samples for the support vector machine algorithm (the proposed machine learning algorithm in this system). The proposed work which is identification of plants species through its leave feature can be expected to find the leaves a better result and accuracy, the identification of plants will be much easier and safe time.

Keywords: Image processing, SVM, plants identification, Identification and Classification

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Natural Language Query System Frameworks: A Survey

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Abstract

A Natural Language Interface to Query Database enables users to query and retrieve information from a database without using any artificial language such as Structured Query Language (SQL). This paper presents a survey of natural language query system framework and aims at finding the issues in existing system, to address them in the proposed system. In the survey it has been found that 70% of the work in natural language interface to database querying has been carried out for SQL and NoSQL share 15%, 10% and 5% of languages like SPAROL, CYPHER and GREMLIN respectively. The Survey done claims that almost every frameworks implemented to work for English language. Thus, the proposed system can be implemented in the language other than English.

Keywords: *NLI2QDB, IR, SQl, NoSQL, Database.*

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VLSI Technology in Design of Future Hardware for Machine Learning: A Review

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Abstract

Machine Learning (ML) and Very Large-Scale Integration (VLSI) technology are the two major and emerging research fields. Machine Learning consumes infinite amount of data, understands the hidden structures and provides automated regression or classification performance accurately. VLSI technology creates low power and high-speed Integrated Circuits (ICs) by properly placing millions of MOS transistors on a single chip. Many Machine Learning algorithms are developed to accelerate the VLSI design procedure by automating various design phases of VLSI chips. Now-a-days VLSI technology accelerating the Machine Learning algorithms' training as well as validation procedures. Previously Machine Learning algorithms are trained and validated on general processors but now-a-days advanced sensors easily generating huge training datasets with improved digital technology. Processors consumes huge amount development time for training and validation of algorithm with big datasets. Graphics Processing Units (GPUs) can reduce the training and validation times with few hundreds of cores but not enough to handle the training datasets in size of many Tera-bytes. VLSI technology can handle this problem with Programmable Logics devices (PLDs) and Application-Specific Integrated Circuits (ASICs). In this paper, we consider different existing hardware units for training and validation of ML algorithms with huge datasets and made a comparative analysis to exhibits the importance of VLSI technology in future hardware design for Machine Learning.

Keywords: Specific integrated circuits, Machine learning algorithms

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PAPER ID: ICRCSIT- 0391

A Survey on Adversarial Deep Learning Models with Multiple Adversaries

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Abstract

The changing nature of warfare has seen a paradigm shift from the conventional to asymmetric, contactless warfare such as information and cyber warfare. Excessive dependence on information and communication technologies, cloud infrastructures, big data analytics, data-mining and automation in decision making poses grave threats to business and economy in adversarial environments. Adversarial machine learning is a fast growing area of research which studies the design of Machine Learning algorithms that are robust in adversarial environments. This paper presents a comprehensive survey of this emerging area and the various techniques of adversary modelling. We develop an adversarial learning algorithm for supervised classification in general and Convolutional Neural Networks (CNN) in particular. The algorithm's objective is to produce small changes to the data distribution defined over positive and negative class labels so that the resulting data distribution is misclassified by the CNN.

Keywords: Supervised learning, Data mining and knowledge discovery, Evolutionary learning, Adversarial learning, deep learning.

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PAPER ID: ICRCSIT- 0392

Cloud Based Gesture Calling System

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Abstract

People interact with each other in different languages and sometimes through gestures depend on the situation and the parties involved in that interaction. Two or more similar language or dissimilar languages people can interact communicate by some means. To make the interaction ease and comfortable always the current/latest technology plays a major role of that particular time. In this paper we discuss about a technology that is Internet of Things (IoT) currently effective and popular. Here we discuss about existing techniques to draw someone's attention and take their help. The practical issues related to few existing systems are explained briefly and the features of the newly proposed system were introduced and it's benefits. The elements of the design include a Rasberry Pi, Accelerometer, Cloud technology, Smartphone.

Keywords: IoT, Accelerometer, Smartphone, Rasberry Pi, Cloud Technology.

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PAPER ID: ICRCSIT- 0396

Critical Analysis of Machine Learning Vs Deep Learning Algorithms for Small and Large Datasets

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Abstract

Image Classification is an important task within the field of computer vision. Image classification refers to the labelling of images into one of a number of predefined categories. Classification includes image sensors, image pre-processing, object detection, object segmentation, feature extraction and object classification. Many Machine Learning and Deep Learning classification techniques like Artificial Neural Network (ANN), Decision Tree(DT), Support Vector Machine(SVM) ,Convolutional Neural Network(CNN), ResNetetc. have been developed for image classification. In this survey various Machine Learning and Deep Learning classification techniques are applied on various types of datasets. Machine learning algorithms generally give efficient and accurate result when applied on lighter datasets where as for heavier datasets Deep Learning algorithms are used. In our survey we will analyze the algorithms like ResNet, convolutional neural network(CNN), Bagging, Bayesian, Decision trees(ID3), Support vector machines, Discriminant Analysis, Nearest Neighbors, Neural network, Random forests by applying them on various datasets to check if the algorithms provide the accurate result as expected. By doing the comparison of the accuracy obtained by applying all the algorithms on a particular dataset we get to know the most efficient algorithm that can be applied on that particular dataset for image classificationSuppose an algorithm does not provide the predicted accuracy, we tweak the parameters that led to the decrease in the accuracy, this is considered as optimization of algorithms.

Keywords: Image pre-processing, Image Classification, Supervised Learning, Unsupervised Learning, Deep Learning, Accuracy measure, Spatial Analysis, Graphical Analysis.

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PAPER ID: ICRCSIT- 0397

Face Detection and Recognition using Machine Learning Algorithm

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Abstract

Face recognition has been a quickly developing and intriguing region progressively applications. An extensive number of face recognition calculation have been produced in a decade ago. In This paper for face detection we are using HOG (Histogram of oriented Gradient) face detector which is a most accurate machine learning technique for face detection. In recognition process we are using CLAHE (Contrast Limited Adaptive Histogram equalization) for preprocessing than we are using HOG which is a standard technique for features extraction. Finally for classification we are using SVM (support vector machine). Pre processing techniques is use for noise removal, contrast enhancement and illumination equalization. The result of this papert show there liability, accuracy and productiveness of the propose method.

Keywords: Face detection, Face recognition, Feature extraction, Pre-processing, Classification, machine learning.

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Smart Garbage Monitoring System using IoT

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Abstract

In public places and villages garbage accumulation is the serious problem now a days. The unhygienic condition leads to different diseases and spoil the environment. This can be solved by maintaining the smart dustbin in the surroundings. In this smart garbage management system is an improvement on the normal bin and it can check the garbage level over the dustbin by using ultrasonic sensor systems. Ultrasonic sensor is an instrument that measures the distance from an object. The automatic opening and closing of the bin can be done by sensor. The buzzer will be enabled when the bin is full. Then it will send alert message when the dustbin is full using GSM module and these GSM modules is connected to the circuit. So regular monitoring and intimating make the system useful in waste management. This leads to clean city for the better living. The mobile app is designed for every day update as graphical representation to ensure the greenish environment and support for swachh bharat for cleanness. It is enhanced by implementing two bins to collect wet and dry waste separately. wet waste can easily be decomposed for making biogas and used for household purpose.

Keywords: IOT, Arduino, Ultrasonic sensor, GSM modulee, LCD, Servo Motor.

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Early Flood Detection and Avoidance System

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Abstract

Flood is unavoidable natural disaster, causing heavy flow of traffic and can also cause severe damage to properties and lives. Early flood detection and avoidance is an intelligent system which keeps close watch over various natural factors to predict a flood, so we can embrace ourselves for caution to minimize the damage caused by the flood. Main objective is to provide information on current water level in the particular area, such as river and drain. When, the water level increases beyond water level, using different sensors at different fields can detect water level and water flow at different sources can avoid flood in the areas near water bodies and then system sends alert notification to the citizens.

Keywords: *Flood detection, Flood notification, IoT, Sensors.*

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PAPER ID: ICRCSIT- 0401

Distributed Databases Storage Engine for Big Data

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Abstract

Trajectory data is very useful for many urban ap- plications. However, due to its spatio-temporal and high-volume properties, it is challenging to manage trajectory data. Existing trajectory data management frameworks suffer from scalability problem, and only support limited trajectory queries. This paper proposes a holistic distributed NoSQL trajectory storage engine, TrajMesa, based on GeoMesa, an open-source indexing toolkit for spatio-temporal data. TrajMesa adopts a novel storage schema, which reduces the storage size tremendously. We also devise novel indexing key designs, and propose a bunch of pruning strategies. TrajMesa can support plentiful queries efficiently, including ID- Temporal query, spatial range query, similarity query, and k-NN query. Experimental results show the powerful query efficiency and scalability of TrajMesa.

Keywords: Big Data, Trajectory data, distributed NoSQL

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PAPER ID: ICRCSIT- 0403

Stock Market Prediction using Linear Regression and SVM

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Abstract

In Stock Market is the financial epitome of financial business and trading since it came into existence it has shown the impact of hits low and similarly when it is high. The stock market crash in 2008 showed the world that the business hit the low when the Dow Jones Industrial Average fell 777.68 %. Several machine learning algorithms have shown that these stock prices can be predicted and these algorithms can be implemented using the approach of supervised learning. In Supervised Learning, we have test data using this we train the models. Although the results obtained after training the model may differ from the actual but it has been observed that in many cases accuracy is satisfactory.

In this paper, the first task is to use web scrapping to collect datasets from stock data. Then we plot the data on the graph, from the graph we can analyze the stock prices going high or low. After this, we will predict stock prices using SVM and Linear Regression, and see which has more accuracy. On analysis it was found that linear regression performed better than SVR with percentage accuracy of Linear Regression being 98.76% and SVR accuracy of 94.32%. Stating the result the Linear Regression Model performed better than SVR.

*Keywords: SVM(State Vector Machine), SVR(State Vector Regression), Linear Regression(LR), k-Nearest Neighbors, Auto ARIMA(*Auto-Regressive Integrated Moving Average*), Prophet, LSTM(Long Short Term Memory);*

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Designing a Device for Entire Body Posture and Eye Blink Analysis, Temperature and Heart Beat Assessment

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Abstract

Now a days, computer is operated by the users for longer durations because of its vast growing technology. By the continuous use of computer health problems like variation in eye pressure, pain in spinal cord and neck, body ache can be caused, So the operators must take care of their sitting posture. These types of issues can be overcome by implementing good sitting posture by use of sensors and communication devices. In this project we continuously monitor the operators for the betterment of sitting posture of their entire body. The ARM board is used. Temperature sensor is used to monitor the change in temperature in human body. Heart-beat sensor is used to monitor the heart rate. Positioning and angles can have analyzed through accelerometer. Flex sensor is used to access the bending information of keen. Eye sensor is used to avoid change in eye pressure. All these alerts are provided via audio and display systems. Our main aim of this paper is to provide the entire body posture analysis along with temperature and heart-beat monitor assessment for the person's who works for extended several period of time such as computer operators.

Keywords—*Microcontroller; flex sensor; eye blink sensor; accelerometer sensor; audio and display system.*

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IoT Based Smart Wearable Gadget for Child Safety and Tracking

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Abstract

Child safety is one of the prime concern due to increasing anti-social activities in the society which is making parents land in an unsecure mind set even when kids are at school, park, etc. Since technology today has touchdown to make people's life easy by providing solution to all the problems in the society. This project is mainly streamed towards child safety solutions by developing a wearable gadget which can be tracked via its GPS locations and also a panic button on wearable gadget is provided to alert the parent via GSM module calling for help. Parental android app is developed to manage and track the wearable device anytime. Smart wearable device is always connected to parental phone which can receive and make phone calls and also receive SMS on gadget via GSM module, also a wireless technology is implemented on wearable device which is useful to bound the wearable device within a region of monitoring range, if wearable device is moving out of monitoring range then an alert will be triggered on parental app, this helps you keep a virtual eye on child. Health monitoring system on wearable gadget checking for parameters like Heart beat/pulse rate and temperature is included which can be monitored on parental app. Wearable gadget also monitors whether it is plugged on hand or not using contact switch and alert the parent as soon as it is unplugged. Hence the technology implementation for child safety providing end to end solution via smart wearable gadget.

Keywords— ***Internet of Things, Children, Arduino, Safety, Wearable.***

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Detection of Lung Nodule and Classification using Deep Learning

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Abstract

Lung cancer is deadliest disease growing all over the world and determining the accurate nodule position and deciding whether cells are highly cancerous or not is the difficult factor. It is important to come up with new tool that help doctors to predict the presence of tumors at early stage for increasing the survival chances of the patient. So, detection of nodule accurately in computed tomography (CT) scans is an important step for detecting the cancer in early stage. Not only detection but classification of tumors as minor and major tumors is also important. The process of classification of lung cancer is the most challenging part. In this paper it utilizes a Otsu segmentation for segmentation of lung nodules in CT scans and Convolution Neural Network (CNN-a concept of machine learning) is used to detecting the lung cancer and uses the Support Vector Machine [SVM] to determine whether the nodule found in the lung is of malignant or the benign. SVM is a machine learning method which improves the learning generalization ability and achieves the minimization of empirical risk.in this project, firstly pre-process the image when RBG image is transformed into gray scale image then enhancing the features and then noise is removed by using the median filter. Later, segmenting the CT scan image OTSU thresholding method will be applied on it. Finally, by using CNN and SVM will classify whether the nodule is malignant or benign.

Keywords — Otsu threshold, image pre-processing, Median filter, nodule detection, CNN, SVM, malignant, benign.

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E-Voting System Using Blockchain

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Abstract

A Blockchain is an electronic registry for a database which is managed by a network of computers. Here, no single computer is responsible for storing or maintaining the database but can verify that the hash on the block is correct or not. Here, any computer may enter or leave this network at any time without violating the trustworthiness of the database. The technology offers a new possibility for the democratic countries to advance from pen and paper to a more cost effective and time efficient election scheme. Here, we propose an online voting system for democratic countries in which casting of votes are considered as transactions, and at the same time verifies that no votes were changed or removed, and no illegitimate votes were added.

Keywords— Ethereum,smartcontracts.

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A Comparative Assessment of Serial and Parallel Processing Speed in OMP for "Newton's Divided Difference Formula"

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Abstract

Finding interpolation is one of the most important problems in computer science, science and engineering operations. The "Interpolation" refers to interpolating some unknown information from a given set of known information. In present days, parallel and distributed computing has become a significant area of research in Computer Science. In Present work implementation of parallel computation of Newton's divided difference formula is done in sequential environment (without OMP) and parallel environment (with OMP, varying number of processors like 2, 4, 8 etc.). As we go on increasing the number of processors execution time is decreases for large number of elements. i.e. above 1 crore, when number of elements is not significantly large i.e. less. Then increasing number of processors execution time also increases because of increased overhead. Speedup is also computed for different number of processors and different problem sizes with respect to without OMP sequential time.

Keywords: Parallel computing, Interpolation, OpenMP, SpeedUp, Efficiency.

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Efficient Eye Blink Detection Method for Disabled

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Abstract

A few people with serious handicaps are limited in a state in which correspondence is for all intents and purposes inconceivable, being decreased to speaking with their eyes or utilizing advanced frameworks that make an interpretation of musings into arguments. The Eye Trailers also Brain-Computer Interfaces (BCIs) are appropriate frameworks for individuals however primary downside is their high cost. We tried four distinct frameworks dependent on infrared, bio electrical signals (Electro-Oculography (EOG) then Electro-Encephalography (EEG), and video preparing. The investigations were performed by individuals with/without inabilities and dissected the frameworks' exhibitions, convenience, and technique for deliberate squinting (long flickers or arrangement of two short squints). The best exactness (99.3%) was acquired utilizing Infrared-Oculography (IR-OG) and the most exceedingly terrible with the EEG headset (85.9%) and there was a factual impact of the innovation on exactness. With respect to strategy for intentional flickering, the utilization of long or twofold squints had no factual impact on precision, barring EOG, and the time taken to perform twofold squints was shorter, bringing about a conceivably a lot quicker interface Individuals with incapacities acquired comparable qualities however with more noteworthy fluctuation.

Keywords: Eye Detection, Tracking, Eye, Detection Correctness.

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PAPER ID: ICRCSIT- 0413

The Virtual Eye: Object Detection and Classification System

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Abstract

Our goal is to enhance the existing system of object detection, face recognition and emotion detection to improve its productivity and detection accuracy. Humans can easily detect and identify objects, recognize people and even understand the emotions present in an image. But for a computer to understand all these it takes a lot of background work. This paper includes three sub modules i.e., object recognition, face recognition and emotion detection. Object recognition is the technology in the field of computer vision for finding and identifying objects in an image. One of the pre trained model VGG-16 with deep learning convolution neural network is used to classify five different emotions happy, sad, neutral, surprise etc. Local Binary Pattern histogram (LBPH) is used for Face detection which can recognize both frontal face and side face.

Keywords: Convolution neural network, Emotion Detection, Face recognition, Local Binary Pattern Histogram (LBPH), Object detection, Object localization, Visual geometry group.

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Prediction of Diabetes Risk Among Security Personnel by using Multiple Regression Model Tool and Impact of Preventive Measure in Reversal of Assessed Risk

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Abstract

This paper is based on the study conducted to know the prevalence of lifestyle disease among employee, establishing relationship between diabetes and risk factors, prediction of diabetes for 2030 and percentage of diabetes risk reduction by subsequently implementing healthy life style among the security personnel of petrochemical plant in Malwa Region, Bathinda. The present analytical study is an organization based cross sectional study to determine the impact of our life style including physical activity, exercise, stress, smoking and alcohol intake, dietary pattern etc. on diabetes.

Keywords: Diabetes Risk, Predictive Analysis, Life Style Diseases

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Smart Detection in Defence using IoT and Image Processing

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Abstract

A military force is a fully armed and well organized and it is mainly intended for war. The main task of the military is usually defined as defense of the state and its interests against external armed threats. Indian army is the fourth largest army in the world. The budget allocated for the year 2019 is about 4310.11 billion. But still there are many challenges facing by the army. Recent research has proposed a moving target defense approach that actively changes transmission line imaginary part of admittance to prevent silent false data injection attacks against the state estimation of a smart grid. We propose an approach to enhancing the hidden moving target against a class of highly structured FDI attacks.

We proposed an approach to detect the unknown intruders from entering into the borders with the help of the image processing. This project detects the unusual activities by terrorists in place of remote areas. This project also track the injured person at remote areas by using GSM system.

Keywords: Military, Transmission and FDI Attacks.

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About Departments

The departments of CSE and IT have commenced right from the inception of this college in 2002 with an intake of 60 and subsequently CSE increased its intake to 240 by 2011 and IT is increased to 180 in 2020. The departments have well equipped laboratories with latest configuration systems. The departments also provide R & D labs with an internet connection for the staff and students to take up their research work. The departments have tie up with various Multi-National Companies which offers training in latest technologies, placements and Internships. The faculty members have authored 24 books, published 57 Patents and most of the research papers were published in SPRINGER, IEEE & SCOPUS indexed journals.

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