

(54) Title of the invention : RECURRENT NEURAL NETWORKS AND LSTM BASED RISK PREDICTION OF DYSLIPIDEMIA IN STEEL WORKERS

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(57) Abstract :

With the development of medical digitization technology, artificial intelligence and big data technology, the medical model is gradually changing from treatment-oriented to prevention oriented. In recent years, with the rise of artificial neural networks, especially deep learning, great achievements have been made in realizing image classification, natural language processing, text processing and other fields. Combining artificial intelligence and big data technology for disease risk prediction is focusing on the field of intelligent medicine. Blood lipids are the main risk factors of cardiovascular and cerebrovascular diseases. If early prediction of abnormal blood lipids in iron and steel workers can be carried out, early intervention can be carried out, which is beneficial to protect the health of iron and steelworkers. This invention around the steel workers dyslipidaemia prediction problem for further study, firstly analyses the influence factors of the steelworker's dyslipidaemia, discusses the commonly used method for prediction of disease and then studied deep learning related theory. This introduces two deep learning algorithms of Recurrent Neural Network (RNN) and Long Short-Term Memory (LSTM). Use the basic principle of Python language and the Tensor Flow deep learning framework, establishes a prediction model based on two deep learning networks and makes an example analysis. Experimental results show the RNN prediction effect is superior to traditional LSTM network, it provides scientific basis for the prevention of iron and steel dyslipidaemia.

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