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(57) Abstract :
Electricity load forecasting is an important guarantee for the safe and economic operation of power grids. For electricity load data with higher dimensions, the forecasting effects of traditional linear regression algorithms are usually not ideal. Kernel function can be used to map the data to a high-dimensional space, so that can make the linear method handle on-linear data. This invention introduces the kernel function into the lasso linear regression method and applies it to non-linear problems to solve the regression analysis problem of non-time series data. Through using the 96-point electricity load data of users in Shanghai since 2014 for 851consecutive days, the prediction effect of kernel lasso regression is better than lasso regression in terms of minimum a square error and minimum average percentage error, which shows that the method can achieve better power load forecasting results.

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