

Adaptive Neuro Fuzzy Inference System Model Based on Support Vector Regression for Stock Time Series Forecasting

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Abstract : Forecasting stock price is a challenging task due to the complex time series of the data. The complexity arises from many variables that affect the stock market. Many time series models have been proposed before, but those previous models still have some problems: 1) put the subjectivity of choosing the technical indicators, and 2) rely upon some assumptions about the variables, so it is limited to be applied to all datasets. Therefore, this paper studied a novel Adaptive Neuro-Fuzzy Inference System (ANFIS) time series model based on Support Vector Regression (SVR) for forecasting the stock market. In order to evaluate the performance of proposed models, stock market transaction data of TAIEX and HIS from January to December 2015 is collected as experimental datasets. As a result, the method has outperformed its counterparts in terms of accuracy.

Keywords : ANFIS, fuzzy time series, stock forecasting, SVR

Conference Title : ICAMAI 2017 : International Conference on Application of Mathematics and Artificial Intelligence

Conference Location : London, United Kingdom

Conference Dates : January 19-20, 2017