

Improving the Accuracy of Stock Price Prediction using Ensemble Neural Network.

Abstract

This paper describes performance of different classifiers (established/combinations/new prediction methods) that are used in predicting stock price. Artificial Neural Network (ANN) was chosen as the target candidates for the forecasting model in this work because of its ability to solve complex problems such as the stock price prediction. We experimented three types of neural network namely Feed Forward Neural Network (FFNN), Elman Recurrent Neural Network (ERNN), Jordan Recurrent Neural Network (JRNN) and compared their predictions' accuracy. We then designed an ensemble neural network that combined FFNN, JRNN and ERNN using bagging method to build a more accurate predictive model. Based on the results obtained, our proposed ENN outperformed the other ANNs by achieving the highest prediction's accuracy.