

Subscription Info

- [› Woman's Art Journal](#)
- [› Women's Review of Books](#)
- [› WAJ-WRB Combo Deal](#)
- [› Journal Catalog](#)
- [› Journal Rate List](#)
- [› Order Single Articles](#)
- [› Reprints/Open Access](#)

Upcoming OCP Events

Feb. 21-24, 2018: College Art Association Conference

Mar. 7-10, 2018: Association of Writers & Writing Programs Conference

www.oldcitypublishing.com

MVLSC 29.1-2, p. 157-181

[MVLSC Home](#) • [Issue Contents](#)

Stock Market Prediction with Big Data Through Hybridization of Data Mining and Optimized Neural Network Techniques

Debashish Das, Ali Safa Sadiq, Noraziah Binti Ahmad and Jaime Lloret

The stock market is non-linear in nature, making forecasting a very complicated, challenging and uncertain process. Employing traditional methods may not ensure the reliability of stock prediction. In this paper, we have applied both data mining and optimized neural network in stock prediction with big data. Data mining allows for useful information to be extracted from a huge data set whilst neural network is capable in predicting future trends from large databases; the hybridization of both these techniques can therefore achieve much reliable and robust prediction. This paper has attempted to make a better prediction result for a complicated stock market. In this research, we have collected data from IT Sector organizations of the Dhaka Stock Exchange, which is an emerging stock market and applied K-means clustering of data mining to select the highly increasing securities, Nonlinear autoregressive neural network technique is applied to predict the stock price. The prediction performance through the hybridization is evaluated and positive performance improvement of prediction is observed which is encouraging for investors.

Keywords: Big data, data mining, artificial neural network, stock prediction, market index, K-means clustering, nonlinear autoregressive neural network.