Predicting Closing Stock Price using Artificial Neural Network and Adaptive Neuro Fuzzy Inference System (ANFIS): The Case of the Dhaka Stock Exchange

Stock market prediction plays a vital rule in taking financial decisions. Various factors affecting the stock market makes stock prediction somewhat complex and difficult. Different data mining techniques such as Artificial Neural Network (ANN), Adaptive Neuro-Fuzzy Inference System (ANFIS) etc are being widely used for predicting stock prices of different stock exchange cases. But there is no good work on stock prediction using ANN and ANFIS for Bangladesh Stock Markets. The goal of this paper is to find out an efficient soft computing technique for Dhaka Stock Exchange (DSE) closing data prediction. In this paper, ANN and ANFIS have been applied on different companies previous data such as opening price, highest price, lowest price, total share traded. The day end closing price of stock is the outcome of ANN and ANFIS model. Our experiment shows that, ANFIS is more effective and efficient technique to predict Dhaka Stock exchange (DSE) data.

Index Terms
Keywords

Artificial Neural Network (ANN), Adaptive Neuro-Fuzzy Inference System (Anfis), Stock prediction, DSE, Grameenphone