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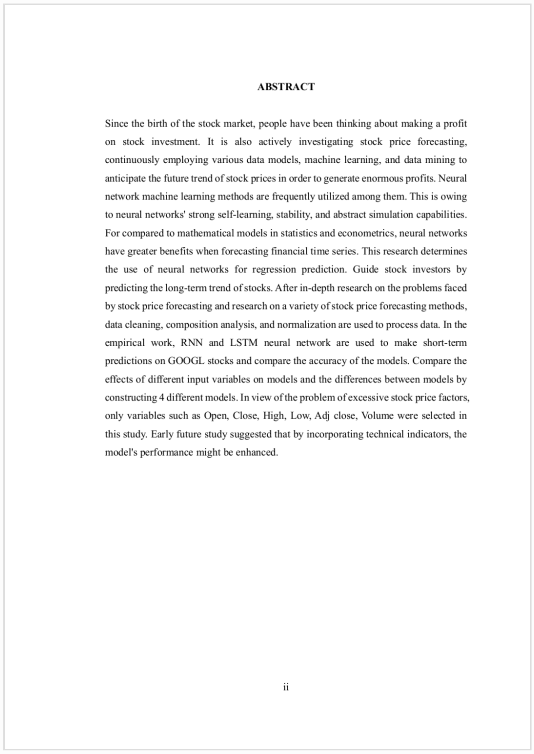

ABSTRACT

Since the birth of the stock market, people have been thinking about making a profit on stock investment. It is also actively investigating stock price forecasting, continuously employing various data models, machine learning, and data mining to anticipate the future trend of stock prices in order to generate enormous profits. Neural network machine learning methods are frequently utilized among them. This is owing to neural networks' strong self-learning, stability, and abstract simulation capabilities. For compared to mathematical models in statistics and econometrics, neural networks have greater benefits when forecasting financial time series. This research determines the use of neural networks for regression prediction. Guide stock investors by predicting the long-term trend of stocks. After in-depth research on the problems faced by stock price forecasting and research on a variety of stock price forecasting methods, data cleaning, composition analysis, and normalization are used to process data. In the empirical work, RNN and LSTM neural network are used to make short-term predictions on GOOGL stocks and compare the accuracy of the models. Compare the effects of different input variables on models and the differences between models by constructing 4 different models. In view of the problem of excessive stock price factors, only variables such as Open, Close, High, Low, Adj close, Volume were selected in this study. Early future study suggested that by incorporating technical indicators, the model's performance might be enhanced.

ii