

Machine Learning Algorithm for Stock Market Prediction – A Comparison

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Abstract

The prediction about the stock market serves as an effort to forecast the value of the market, an individual stock, or a particular industrial sector. The prediction or forecast is usually done by using several approaches and analyzing the fundamental or technical details of an industry, an economy, or both. Predicting stock markets is very essential, as successful prediction can help in proper decision-making as well as in increasing the profit of the business. As prediction of the stock market is a bit complicated and challenging, conventional methods do not consistently forecast the changes with absolute certainty. For this reason, the proposed study has come up with a comparison of the machine learning models for forecasting the market changes. The aim of the study is to compare two machine learning models: the decision tree (DT) algorithm, which excels at handling nonlinear relationships and feature interaction, and the long short-term memory (LSTM) algorithm, which could efficiently capture long-range dependencies in sequential data. The Yahoo Finance dataset was used for performing the comparison. The results observed will be utilized to analyze the stock expenses and their predictions in the future.

Keywords: Stock Exchange, Yahoo Finance, DT, LSTM, Machine Learning Accuracy.




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