

Nifty Fifty Stock Index Value Forecasting using Deep Learning

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Abstract: In this project a forecasting system is presented which can predict the change in stock market value of Nifty Fifty index using the historical data of various factors influencing the stock value. Traditional stock market prediction models only factor in the trends of the historical data of the targeted stock value which is then fed to a time series algorithm to get a forecast. Since the real-world stock market is constantly being influenced by various factors, it is not possible to take all those factors into account and make the forecast, let alone using the target stock by itself. So, the objective of this project is to analyze and use the trends in the factors that majorly influence Nifty Fifty index like international stock indices and commodities that affect the economy and the stock market into consideration and use a deep learning model, Long Short-Term Memory (LSTM) which is based on Recurrent Neural Networks (RNN) which has the architecture that can retain the past information and use it in the prediction along with the observations at the current time step. This will allow the predictions to be more accurate and make it possible to make a better decision when investing in the Nifty Fifty index.

Keywords: Deep Learning, Long Short-Term Memory, Recurrent Neural Network, Stock Price Prediction.

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