LSTM - Algorithm

* Input: Historical Data with a period of 25 years of Bharat Forge
* Output: Prediction of stock price
* Algorithm:
* Step 1. Start.
* Step 2. Extracting data using Yahoo Finance API.
* Step 3. Import dataset using Pandas.
* Step 4. Data Pre-processing after getting the historical data of Bharat Forge.
* Step 5. Do a Feature Scaling on the data so that the data values will vary from 0 to 1.
* Step 6. Splitting the dataset into training and testing test.
* Step 7. Building the LSTM model and initialize the RNN by using Sequential repressor.
* Step 8. Adding the first LSTM layer and some Dropout regularization for removing unwanted values.
* Step 9. Adding the output layer.
* Step 10. Compiling the RNN by adding adam optimization and the loss as mean-squared-error.
* Step 11. Making the predictions and visualizing the results using plotting techniques.
* Step 12. Checking the accuracy using Mean Squared Error and R squared score method.



For many business analysts and researchers, forecasting the stock market price is

always a challenge. Stock market prices estimation is not only an interesting but also

challenging area of research. Predicting the stock market with full accuracy is very

difﬁcult as external entities such as social, psychological, political and economic have a

great and substantial inﬂuence on it. The main characteristic of the data associated with

stock market is usually time variant and nonlinear. Prediction of stock market plays a

vital role in stock business [1]. If investors lack sufﬁcient information and knowledge

then their investment can suffer the greatest loss.

Investors must predict the future stock value of companies in order to obtain high

proﬁts. Various prediction techniques have been developed to do predictions on the

stock market accurately. There were two methods widely known as conventional

methods at the time when there were no computational methods for risk analysis. There