Statistical Learning Lab

Assignment - 8

Recurrent Neural Network for Stock Prediction

1. Choose a stock of your choice from NIFTY 50 list from Yahoo Finance.

2. Take last 5 years stock price data of the selected stock.

3. Create test dataset for past 3 months, and training set from 5 years to the date before 3 months.

4. Use a predictive model using 3 LSTM layers, with past 60 days data, ntimestep = 60, dropout regularization ndrop = 0.2.

5. Create the plots comparing observed value of the test data and the predictive value.

6. Use grid search to optimize hyperparameters such as ndrop , ntimestep and batch size. Compare test result with previous findings.

   Give the result and the code in a single pdf document along with plots.