Solution Sheet

1. Which model have you used for stock price prediction? Explain your model.

**MODEL**: Xgboost

Steps involved:

* Exploratory data analysis (value counts for categorical , bar plots heatmap , pearson correlation )
* Data Preprocessing which involves cleaning data , handling missing values
* Fitting Training\_Dataset into Xgboost Model
* Predicting results on Test dataset

Preprocessing was the first step,where training dataset was preprocessed.Missing values were placed with the help of forward fill and finally in preprocessing categorical variables were converted into numeric variables byonehot encoding .

After encoding the features were standardized using standardscaler then model was trained with training dataset with the help of XgboostRegressor and therefore predicting Test dataset from the model trained above.

1. Which model have you used for Put-Call ratio Time series prediction? Explain your model.

**Model**: Recurrent Neural Network(Long short-term memory)

Steps Involved:

* Data Preprocessing which involves cleaning data , handling missing value(using linear interpolation), reshaping.
* Fitted Put-call Ratio Time Series dataset into RNN model and predicted the 16th Aug 2020 Put-call Ratio values in test dataset.

Updated the 16th Aug 2020 Put-call Ratio in test dataset and trained with model made in 1st part (XgboostRegressor) to predict stock price of test data on 16th Aug 2020.