Solution Sheet

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

Ans- I have used Xgboost-Regressor model to predict the stock price. XGBoost is a decision-tree-based ensemble machine learning algorithm that uses a gradient boosting framework. The parameters which are used is as folows-

(booster='gbtree', colsample_bylevel=1, colsample_bynode=1, colsample_bytree=0.6, gamma=0,importance_type='gain', learning_rate=0.01, max_delta_step=0,max_depth=4, min_child_weight=1.5, n_estimators=2400, n_jobs=1, nthread=None,reg_alpha=0.6, reg_lambda=0.6, scale_pos_weight=1,silent=None, subsample=0.8, verbosity=1)

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

Ans- I have Used LSTM (long short term memory) model to predict the Put-Call ratio on 16th aug. LSTM is a Recuurent Neural Network which is best to for predicting time series data. The model architecture is as follows-

```
Model: "model_1"
_________________________________________________________________
Layer (type)                 Output Shape              Param #
=================================================================
input_1 (InputLayer)         (None, 5, 1)              0
_________________________________________________________________
lstm_1 (LSTM)                (None, 128)               66560
_________________________________________________________________
dense_1 (Dense)              (None, 1)                 129
=================================================================
Total params: 66,689
Trainable params: 66,689
Non-trainable params: 0
_________________________________________________________________
```