**Lab Assignment 3**

Objective: Compare performance of MLP, RNN and LSTM in stock price prediction.

* Collect/download daily trading data of at least 5 different companies’ from Nepse Alpha. Choose two banking stocks, one insurance stock, one hydro stock, one development bank stock.
* Handle missing data. Replace missing value by average of previous and next value.
* Generate target feature “Next Day’s Close Price”, which is close price simply back shifted by 1 position.
* Split data into training, validation, and test sets in 8:1:1 ratio.
* Normalize data using standard scalar.
* Predict next day’s close price by looking into previous 5 day’s data. { i.e. window size or look back period=5}
* Perform inverse transformation of predicted price and close price of test data.
* Plot curve of predicted and actual close prices of test data.
* Plot loss and accuracy curves of training and validation data on the basis of epochs.
* Compute RMSE and MAE of predicted stock prices.
* Compare performance of MLP, RNN and LSTM on the basis of above two measures.