PMDS603P Deep Learning Lab Experiment 12

October 2025

1 Work to do today

Note: Make a single PDF file of the work you are doing in a Jupyter notebook. Upload with the proper format. Please mention your name and roll no properly with the Experiment number on the first page of your submission.

Question 1: Fit a Bi-directional LSTM model to predict the next day gold price given the gold price of 10 consecutive days. Use the dataset provided in Experiment 9. Now compare your results with the normal RNN model you have already fitted.

Question 2: Further fit a Bi-directional GRU model for the same problem and verify the results.

Questions 3: Next, we will try to attempt the sentence completion task mentioned in lab experiment 11. Think how you can create a simple model with an RNN to predict the next word once you give a sentence to the model. Try to create one such model that can do this task. Use the same IMDb dataset for the task. (Hint: Try to first prepare the sequences for training just like we did in gold price prediction, Sequences in which we have say 10 words as inputs and the next word as output. And we can plan, like, in our model, the final layer with a vocabulary size number of neurons. So that you can run with a softmax activation function in the final layer.