

## Assignment 3

Advanced Machine Learning ( CS566 )

Department of CSE, IIT Patna

(Read all the instructions carefully and adhere to them.)

**Date:** 10-Apr-2020

**Deadline:-** 17-Apr-2020

### Instructions:

1. Markings will be based on the correctness and soundness of the outputs.
2. Marks will be deducted in case of plagiarism.
3. Proper indentation and appropriate comments (if necessary) are mandatory.
4. You should zip all the required files and name the zip file as:  
***roll\_no\_of\_all\_group\_members.zip , eg. 1501cs11\_1201cs03\_1621cs05.zip.***
5. Upload your assignment ( the zip file ) in the following link:

<https://www.dropbox.com/request/Cj2tH9xcCXRbA9cf9eZg>

***For any queries regarding this assignment contact:***

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**Problem Statement:** Given a message (tweet) and classify the sentiment of the message as a positive, a negative, or a neutral.

**Dataset:** Download the dataset for Sentiment Classification from here

[https://drive.google.com/drive/folders/1V\\_5\\_uppSaF-wuPnafD7vpqw9rWF1pJP0?usp=sharing](https://drive.google.com/drive/folders/1V_5_uppSaF-wuPnafD7vpqw9rWF1pJP0?usp=sharing)

**Methods:** Classify and compare the results based on the following methods

1. Feed Forward NN
2. Vanilla RNN
3. LSTM
4. GRU

**Evaluation Metrics:** Classify the dataset for Sentiment Classification and evaluate the following metrics:

1. Accuracy
2. F-score
3. Precision and recall
4. Confusion matrix