

CS564 - Foundation of Machine Learning
(Read all the instructions carefully and adhere to them.)

Assignment - 6: Neural Network

Deadline: 23/11/19

Date: 16/11/19

- 1) In the field of natural language processing, finding the sentiment of a sentence is an important problem. In this assignment, we have attached [a movie-review dataset](#). This movie-review dataset is a collection of movie-reviews labeled with their respective overall *sentiment polarity* (positive or negative).

Go through the movie-review dataset and design feed forward networks and show the evaluation in terms of precision, recall, f-score and accuracy. For the aforementioned networks, show the effect of back propagation on the learning rate (LR) and the step size.

- (Hint: Plot loss vs. LR, loss vs. step size, etc.)
 - Note: Do not use any DL libraries (such as Theano, Keras, TF, PyTorch, etc)
- 2) Implement multilayer perceptron (MLP) for XOR and NAND. Do not use any deep learning library.

Submission guidelines:

1. Markings will be based on the correctness and soundness of the outputs. Marks will be deducted in case of plagiarism.
2. Proper indentation and appropriate comments (if necessary) are mandatory.
3. You should zip all the required files and name the zip file as roll_no_of_all_group_members.zip, eg. 1601cs11_1601cs03_1621cs05.zip.
4. Upload your assignment (the zip file) in the following link:
<https://www.dropbox.com/request/kUBYmkRHAYPTI1Kr9ZT1>

For any queries regarding this assignment contact:
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