

E0 334 - Deep Learning for NLP

Assignment 5

(Part (a) due by 16th Oct, 11:59 PM), (Part (b) due by **28th Oct, 11:59 AM**)

Note: Use the following links for submitting your results of Assignment 5.

For Part (a): <https://forms.office.com/r/pSqnP0gUyv>

For Part (b): <https://forms.office.com/r/QZE1uBSDZ2>

Problems:

Part (a): In this part of the assignment, you will implement the encoder part of Transformer architecture presented in [1] and use the output of the last encoder to design a classifier. Report your results for the data set used in Assignment 2.

Part (b): In this part of the assignment, you will use Transformer networks to solve simple arithmetic word problems. The problem can be treated as a machine translation problem from English language text to the language of arithmetic expressions. The output arithmetic expression (denoted as Equation in the data file) can be processed using the Input Numbers to produce the final Output.

The dataset is available in the file 'ArithOpsTrain'. The test set will consist of the following information - Description, Question and Input Numbers. You are expected to generate a single number as an Output for every test set instance. The output file (in the given format) should be uploaded while filling in the required form details.

The test set will be made available by **28th Oct, 11:30 AM**.

References

1. Vaswani *et al*, Attention is All You Need. (<https://arxiv.org/pdf/1706.03762>)