

# E0 334 - Deep Learning for NLP

## Assignment 2

(due by 17th Sept, 11:59 PM)

Note: Use the following links for submitting your results of Assignment 2.

For Part (a): <https://forms.office.com/r/mrRZT9EFw7>

For Part (b): <https://forms.office.com/r/Rf6TxbeX3L>

### Problems:

#### Part (a):

In this assignment, we will study the use of attention mechanism [1] to translate human readable dates to machine readable dates. You can use the encoder-decoder network proposed in [1] or its variants. The dataset consisting of 40,000 examples is provided ('Assignment2aDataset.txt'). Report your results using the form mentioned above.

Consider the tasks of translating "Saturday 29 February 2021" to "2021-02-29" and "29 February 2020" to "2020-02-29". Visualize the parts of the input to which every output pays attention to, while doing the translation.

**Part (b):** In this part of the assignment, you will implement the hierarchical attention mechanism presented in [2]. Report your results for the data sets (Classification1 and Classification2) used in Assignment 1.

#### References

1. Bahdanau *et al*, Neural Machine Translation by Jointly Learning to Align and Translate. (<https://arxiv.org/pdf/1409.0473.pdf>)
2. Yang *et al*, Hierarchical Attention Networks for Document Classification. (<https://aclanthology.org/N16-1174.pdf>)