

# Natural Language Processing AIGC 5501

## Final Assignment

### Python Notebook Submissions

Understand the use cases and code them in your own way in the Jupyter Notebook using Python and your preferred libraries.

#### 1) Character-level recurrent sequence-to-sequence model.

This example shows how to build a simple character-level recurrent sequence-to-sequence model. We use it to translate short English sentences into short French sentences, one character at a time. Keep in mind that character-level machine translation is quite uncommon, as word-level models are more typical in this area.

[https://keras.io/examples/nlp/lstm\\_seq2seq/](https://keras.io/examples/nlp/lstm_seq2seq/)

#### 2) Neural machine translation with attention (*complete as much as you can*)

This example shows how to train a sequence-to-sequence model for Spanish-to-English translation, roughly based on Effective Approaches to Attention-based Neural Machine Translation (Luong et al., 2015).

[https://www.tensorflow.org/text/tutorials/nmt\\_with\\_attention](https://www.tensorflow.org/text/tutorials/nmt_with_attention)

### Deliverables:

Submit 2 separate Python notebooks for exercises 1 & 2

- a) All notebook cells need to be executed without error
- b) Add comments/explanations to your code patches