COMP 411, Homework : *Working with Recurrent Neural Networks*
Due by 11:59pm on December 10, 2021

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1. Tensorflow and RNNs

Read and/or work through the following tutorials.

`https://www.tensorflow.org/guide/keras/rnn`
`https://www.tensorflow.org/text/tutorials/text_classification_rnn`
`https://www.tensorflow.org/text/tutorials/text_generation`

You may also find the following API references helpful.

`https://keras.io/api/layers/recurrent_layers/simple_rnn/`
`https://keras.io/api/layers/recurrent_layers/lstm/`

What are the most useful or unexpected things you learned while working through the tutorials?

2. Applying RNNs to Your Data

Now is your chance to apply an RNN or LSTM to data of interest to you. You are also welcome to work with data from one of the tutorials, but try using the RNN to predict or classify something at least slightly different from what they do in the tutorial. Make some plots showing training and testing performance. Also discuss any issues you ran into during training, and show plots for anything else you think would be useful for understanding the data or performance. What have you learned from using an RNN on your data?