



Mini-Project: Topics in Deep Learning, TDL211

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Winter 2021

Assignment 3

Due 4pm, Friday, December 25, 2020

The goal of this assignment is to get a hands-on experience with one of the most common benchmarks for sequence models, the copy task. **Submit 2 files (NOT zipped):** `copy_task.py`, and `ex3.pdf`.

Complete the following tasks.

1. Adapt the base script `copy_task_base.py` so that it can use the MLP/RNN/LSTM layers you created in Assignment 2. Put your adapted version in a `copy_task.py` file.
2. Reproduce Fig. 1 from <https://arxiv.org/pdf/1511.06464.pdf> using the architectures MLP/RNN/LSTM for time lags 10, 20, 50, and 100. The baseline loss can be computed using the formula in Sec. 5.1 in the paper.
3. Create a table that reports the accuracy results you obtained with the various architectures for different time lags. For instance, the rows of the table will be the time lags 10, 20, 50, 100, and the columns will be the architectures Baseline/MLP/RNN/LSTM.
4. Prepare an `ex3.pdf` document with your figures and accuracy results.

Good luck!