**Hands-on Assignment 5**

Due Date: See Web

(HA5 on RNN and HA6 on BERT are mutually exclusive.)

**Objective:** Design and train a vanilla RNN to recognize palindrome numbers with up to 5 digits.

Palindrome numbers are numbers that read the same forwards and backwards.  Here are few examples:

121, 1331, 12321, 44444, 98789, ...

Design your model starting from the code for Tutorial 4. You will need to generate the training data by yourself. Train 3 models with 200, 2000 and 20000 training examples respectively, each with 50% positive and negative examples.

The TA will test-run your models on a test set name “test.txt” with the following format:

123 0

121 1

13543 0

13531 1

Include a README file in your submission, which should contain:

* Training log: hyperparameter and training loss figure,
* Your own testing results, and
* Instructions to run your code on “test.txt” (for all three of your trained models).

**Notes**:

1. **Submission format**: A single zip file with all your files. No need to include the dataset. The zip file should be named Student\_ID\_Assign#.zip, i.e. 1234567\_Assign5.zip.
2. **headers:** Add the following headers at the beginning of your submission code:

"""

Student Name:

Student ID:

Student Email:

"""

1. If you need help or made mistakes on submission, please email TAs directly.
2. Similarity penalty will not be applied to this assignment. However, the Turnitin report will be used as clues for manual plagiarism detection.

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