

Deep Learning: Homework #3

In this homework, we will use Google's Tensorflow (TF) to create deep neural networks (RNNs), in order to perform auto-completion of the last letters of four-letters words:

wor -> d
woo -> d
dee -> p
div -> e
....

Task #1 (Code Completion)

In this task, you need to understand the provided python source code (autocomplete.py). In particular, there are some missing parts of the code marked with "?", for example:

```
outputs = tf.transpose(outputs, [?, ?, ?])  
outputs = outputs[?]
```

Task #2 (Change the code to predict the third letter, instead of the fourth letter, given the first, second, and the fourth letters)

Current version predicts the fourth letter, given the first, second, and the third letters:

wor -> d
dee -> p
div -> e

Change the code, so that it will predict the third letter, given the first, second, and the fourth letter:

wo_d -> r
de_p -> e
di_e -> v

Submit a report, containing the following:

1. Task #1: completed python code, printed out (font size 9)
2. Task #2: completed python code, printed out (font size 9)

Checklist:

1. Don't forget to write down your name and student ID
2. The report MUST be written in English. Reports with other languages will NOT be accepted.
3. Hand-writing of the report is not permitted.
4. Discussion with other students are strongly encouraged, but you should make your own answers to the questions.