



SCS Fall - 2020

Home

Announcements

Assignments

Grades

Bb Collaborate

Discussions

Calendar

Inbox

History

Course Evaluations

Help

Assignment 1 - Deep Learning using Keras

Re-submit Assignment

Due Oct 13 by 6pm Points 15 Submitting a text entry box, a website url, or a file upload

The assignment is to extend Francois Chollet's IMDB example.

To run it in Colab:

- Go to <https://colab.research.google.com/github/fchollet/deep-learning-with-python-notebooks> and run 3.5-classifying-movie-reviews
- Don't be surprised when you see a warning about the notebook not being approved by Google
- Add the following to the first cell (see <https://stackoverflow.com/questions/55890813/how-to-fix-object-arrays-cannot-be-loaded-when-allow-pickle-false-for-imdb-lo>). When you run the following cell you will be prompted to restart your runtime. Click the button to do the restart.

```
!pip install numpy==1.16.1
import numpy as np
```

To run it on your own machine if you have TensorFlow installed:

- Go to <https://github.com/fchollet/deep-learning-with-python-notebooks>
- Click the green "Clone or download" button. Select "Download zip" to download a zip of the set of notebooks. Set up a folder on your computer for this course, move the zip there and expand it.
- Start jupyter notebook and navigate to 3.5-classifying-movie-reviews

Try running it. You'll encounter an error with the history object. Two of the keys have changed: acc and val_acc are now binary_accuracy and val_binary_accuracy. Fix them to allow the rest of the notebook to run.

Do the four experiments under "Further experiments" near the end of the notebook.

Submit your .ipynb file to Quercus (be sure to submit the fully executed notebook). If you are using Colab you can retrieve the notebook by going to the File menu, then select "Download to .ipynb". All programs should be commented in such a manner as to clearly describe the purpose of the code used to accomplish the purpose. Also, make sure to provide a brief and clear interpretations of the results.

General best practices for assignments:

- Program factored into appropriate functions
- Functions have appropriate length and complexity
- Clear function, parameter, and variable names used
- Program is easy to read and understand (i.e. proper documentation)

Proper documentation

Comments must provide the understanding of a program by briefly pointing out details or by providing a larger-scale view of the proceedings.

Please see below some considerations for better documentation of your assignments:

- Documentation and comments that describe the *purpose* of the code and *why* it does thing. Example: include a sentence describing the purpose and contextualizing (give preconditions and postconditions of each function) the purpose of the program unit in simple language.
- Consistent indentation and formatting of code blocks to make the structure of the code visible
- Interpretation of the results in simple language and implications if any.

Assignment 1 Rubrics

Criteria	Ratings		Pts
Experiment 1: Using 1 or 3 hidden layers Evaluation Measure : Code for Validation and Test Accuracy	3.0 pts Full Marks	0.0 pts No Marks	3.0 pts
Experiment 2 : Using less or more Hidden Units (Eg. 32 or 64) Evaluation Measure : Code for Validation and Test Accuracy	3.0 pts Full Marks	0.0 pts No Marks	3.0 pts
Experiment 3 : Using MSE instead of binary_crossentropy Evaluation Measure : Code for Validation and Test Accuracy	3.0 pts Full Marks	0.0 pts No Marks	3.0 pts
Experiment 4: Using tanh activation instead of relu. Evaluation Measure : Code for Validation and Test Accuracy	4.0 pts Full Marks	0.0 pts No Marks	4.0 pts
Documentation All programs should be commented in such a manner as to clearly and briefly describe the purpose of the code used to accomplish the purpose as well as a brief and clear interpretations of the results.	2.0 pts Full Marks	0.0 pts No Marks	2.0 pts
Total Points: 15.0			

Submission

✓ Submitted!

Oct 12 at 12:25pm

[Submission Details](#)

[Download TERZIOGLU, Kerim Assignment 1, 3.5-classifying-movie-reviews.ipynb](#)

Grade: 15 (15 pts possible)

Graded Anonymously: no

Comments:

No Comments

