

PROJECT

Your first neural network

A part of the Deep Learning Nanodegree Foundation Program

PROJECT REVIEW

CODE REVIEW

NOTES

Requires Changes

1 SPECIFICATION REQUIRES CHANGES

SHARE YOUR ACCOMPLISHMENT



Great work in general!

You've done a great job for your first neural net :)

Please take a look at my feedback, correct what I commented on and you'll be good to go

Good luck! I look forward to see the amazing things you build next :)

Code Functionality

- ✓ All the code in the notebook runs in Python 3 without failing, and all unit tests pass.

Good job! All unit tests passed!

- ✓ The sigmoid activation function is implemented correctly

Great job! Nice implementation of the sigmoid function!

Forward Pass

- ✓ The input to the hidden layer is implemented correctly in both the train and run methods.

Well done!

- ✓ The output of the hidden layer is implemented correctly in both the `train` and `run` methods.

Great job! Good use of the activation function!

- ✓ The input to the output layer is implemented correctly in both the train and run methods.

Well done!

- ✓ The output of the network is implemented correctly in both the train and run methods.

Great work! In this case the activation function is indeed $f(x)=x$

Backward Pass

- ✓ The network output error is implemented correctly

Good job!

- ✓ Updates to both the weights are implemented correctly.

Great work updating the weights!

Hyperparameters



- The number of epochs is chosen such the network is trained well enough to accurately make predictions but is not overfitting to the training data.

Good effort here!

Please note that it's very hard to know whether you converged already or not because of the scale of the graph, your current loss is ~0.1 while your ymax is 1.5. Please change the ylim to be 0.5, to make sure we really reached convergence.
(Hint: you should reach a ~0.05 loss for training and ~0.15 for validation)



- The number of hidden units is chosen such that the network is able to accurately predict the number of bike riders, is able to generalize, and is not overfitting.

Good job! This number of hidden units satisfies the assignment requirements! :)

For future reference, here's a good guide on how to determine a good number of hidden units - <https://www.quora.com/How-do-I-decide-the-number-of-nodes-in-a-hidden-layer-of-a-neural-network>



The learning rate is chosen such that the network successfully converges, but is still time efficient.

Good job here!

The effective learn rate in this case is `self.lr/n_records`, which in this case is equal to $0.5 / 1440$ which is quite small, but still OK :)

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