UDACITY

Return to Classroom

Predicting Bike-Sharing Patterns

REVIEW

CODE REVIEW 9

HISTORY

Meets Specifications

Hello student, I am very happy that you passed all of the points. You understood the neural networks and you have predicted the shared bikes appropriately. Congratulations!
About the last question it was christmas and for these special days our model does not work as well as for the working days. There are no 0 and 1 values, as the AI has the black box logic. The people change their habits in the holidays, such as bike riding. With more data we could produce an even better model for the christmas period too. A more complicated model may be the solution too, but it is failing only for 10 days in a year, which does not mean that the model is underfitting. For more resources:

1.
   - I have done a webinar about neural networks
   - and one for the Predicting Bike-Sharing Pattern project
2. Machine Learning Glossary
3. Neural networks and gradient descent
4. Neural networks by Stanford university
5. What is the Difference Between a Parameter and a Hyperparameter?

Good luck with the next projects. You are gonna learn a lot!
Please, don't forget to rate my work as project reviewer! Your feedback is very helpful and appreciated.

Code Functionality

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

The network architecture passes the tests

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The sigmoid activation function is implemented correctly

Nice ,see the details in the code

Forward Pass

The forward pass is correctly implemented for the network's training.

It is done correctly, see the details

The run method correctly produces the desired regression output for the neural network.

As expected! See the code details

Backward Pass

The network correctly implements the backward pass for each batch, correctly updating the weight change.

It is done correctly.
See the code details.

Updates to both the input-to-hidden and hidden-to-output weights are implemented correctly.

This should be distributed more as in the course, however is right.
See the code details.

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.

It is not overfitting, the validation is always getting better, see the code details

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.

With two nodes you can model the XOR function, but the features in this case are much more and the hidden nodes have to adapt them from the input nodes

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

The learning rate is a factor that is multiplied with every weight. A small change may have big impact.
In this project the model converges, both currves are going down.

The number of output nodes is properly selected to solve the desired problem.

See the code details

The training loss is below 0.09 and the validation loss is below 0.18.

You did it!

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9 CODE REVIEW COMMENTS ›

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