Programming Assignment: Tensorflow

Passed and verified · 100/100 points

Deadline Pass this assignment by April 1, 11:59 PM PDT

Instructions

My submission

Discussions

Assignment: Tensorflow

KH

cost calculation, logits definition

Kevin Huang Assignment: Tensorflow · 18 days ago

The assignment says logits in the cost() function is the Z (pre-activation values); but why does input[98] apply the sigmoid function to the array before feeding them into cost() as logits?

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KH Kevin Huang · 18 days ago

Hi Ricardo,

Thanks. But that is my question, the value passed to tf.nn.sigmoid_cross_entropy_with_logits() is already the "a" vactor, not the z vector since the sigmoid function is applied in input[98]?

logits = sigmoid(np.array([0.2,0.4,0.7,0.9]))

cost = cost(logits, np.array([0,0,1,1]))

No?

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Ricardo Cruz Mentor · 18 days ago

Ah - that is a typo.

It has been discussed previously in the forum. The main code itself is correct, but that snippet of code is wrong, you're right.

Sorry about that! Unfortunately, there are many typos that need fixing in the notebooks... :(

2 Upvotes

KH Kevin Huang · 18 days ago

OK, thanks. By the way, is there a debug mode in the interactive notebook? I don't know how to step through the code for debugging like I did with Octave.

And is there a way to download the lecture slides?

Thanks.

0 Upvotes

Ricardo Cruz Mentor · 18 days ago

I don't know about any way to do debugging in

Jupyter notebooks, other than using "prints".

It's a little tedious to add a print everywhere, but there is no other way.

But TensorFlow is impossible to debug anyway, inside or outside a notebook. The separation between building and evaluating the graph is very cool, but makes TensorFlow impenetrable to a debugger. The only way to debug TensorFlow the way you want would be to use the Eager Execution API.

0 Upvotes

KH Kevin Huang · 17 days ago

OK, thanks a lot :)

0 Upvotes

Reply

Ricardo Cruz Mentor · 18 days ago

TensorFlow **tf.nn.sigmoid_cross_entropy_with_logits()** function uses the Z values. It automatically applies the sigmoid for you.

This is for mathematical reasons. It internally uses a simplified formula, which avoids the extra computations of applying the sigmoid.

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