5. Predicting the Test Data

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Project due Nov 5, 2020 05:29 IST *Completed*

Now fill in the code for the function `predict`, which will use your trained neural network in order to label new data.

You will be working in the file `part2-nn/neural_nets.py` in this problem

Implementing Predict

5.0/5.0 points (graded)

Available Functions: You have access to the NumPy python library as `np` , `rectified_linear_unit` and `output_layer_activation`

Note: Functions `rectified_linear_unit_derivative` , and `output_layer_activation_derivative` can only handle scalar input. You will need to use `np.vectorize` to use them

```
class NeuralNetwork(NeuralNetworkBase):

    def predict(self, x1, x2):

        input_values = np.matrix([[x1],[x2]])

        # Compute output for a single input(should be same as the forward propagation in training)
        hidden_layer_weighted_input = self.input_to_hidden_weights.dot(input_values) + self.biases# TODO
        ReLU_vec = np.vectorize(rectified_linear_unit)
        hidden_layer_activation = hidden_layer_activation = ReLU_vec(hidden_layer_weighted_input)# TODO
        output = self.hidden_to_output_weights.dot(hidden_layer_activation)# TODO
        activated_output = output_layer_activation(output)# TODO

        return activated_output.item()

```

Press ESC then TAB or click outside of the code editor to exit

Correct

Test results

See full output

CORRECT

See full output

Submit You have used 1 of 25 attempts

When you're done, run the script and make sure that all of your predictions pass the test cases.

Discussion

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? 5. Predicting the Test Data: Answer stuck in processing stage without giving a grade 1

? floating points 5

I'm having difference in floating points between expected and my result. Any suggestions on how to overcome it

?	[STAFF] Processing for a long time Processing for a long time and not completing. How long to wait? Any idea?	18
💬	Project grader and questions I have had issues with the grader and have failed so far to get this relatively simple exercise correct after many trials. I feel I am eithe...	2
💬	Switch this exercise with the previous It seems that this exercise could be framed as a helpful intermediate step for the previous exercise. After working through the previ...	2
☑	Testing locally How can i test this function locally?	4
?	[Staff] Need help to track down the error in my code Strangely my answer seems to be off by a multitude of 3 but it returns the correct values when I run it locally. At least if i understand...	2
💬	Processing in grader would never complete because of way I was using np.vectorize() Grader never completed if I did this. vrelu = np.vectorize(rectified_linear_unit) hidden_layer_activation = vrelu(hidden_layer_weighte...	3
💬	Getting an error 'input_to_hidden_weights' is not defined I am getting this error. It seems the input weights variable is not available/visible to the testing program. Any help will be greatly app...	4
☑	Incorrect result with random network params I've passed the other tests. But in the "Testing random datapoint predictions near a random line, with random network parameters"...	5
💬	ValueError: can only convert an array of size 1 to a Python scalar What does it mean?: return activated_output.item() ValueError: can only convert an array of size 1 to a Python scalar	2
?	@Staff, need a hint. Stuck at "Point 11 failed to be predicted correctly" Hi Staff, I believe my program is correct. Please give me some hint where I am wrong. My predicted value is 6 which does not match ...	5
💬	[Staff] : Grader referencing the old submission. Hi Staff, Initially i have used max(0,x) in the rectified_linear)unit in activation function and grader had accepted it as correct. Now in t...	3
	[Staff] Submitting Error	

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