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Machine Learning with Python-From Linear Models to Deep Learning

Progress Discussion Resources Dates Course

☆ Course / Unit 3. Neural networks (2.5 weeks) / Project 3: Digit recognition (Pa



5. Predicting the Test Data

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Project due Apr 5, 2023 08:59 -03 Completed

Now fill in the code for the function predict, which will use your trained neural networ 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
output_layer_activation

Note: Functions [rectified_linear_unit_derivative], and [output_layer_activation handle scalar input. You will need to use [np.vectorize] to use them

```
1 class NeuralNetwork(NeuralNetworkBase):
2
3
      def predict(self, x1, x2):
4
5
6
          input_values = np.matrix([[x1],[x2]])
7
8
          # Compute output for a single input(should be same as the forward
9
          hidden_layer_weighted_input = np.dot(self.input_to_hidden_weights,
10
          relu_vec = np.vectorize(rectified_linear_unit)
          hidden_layer_activation = relu_vec(hidden_layer_weighted_input)
11
          output = np.dot(self.hidden_to_output_weights, hidden_layer_activa
12
13
          activated_output = output_layer_activation(output)
14
15
          return activated_output.item()
```

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



Test results **edX**

About

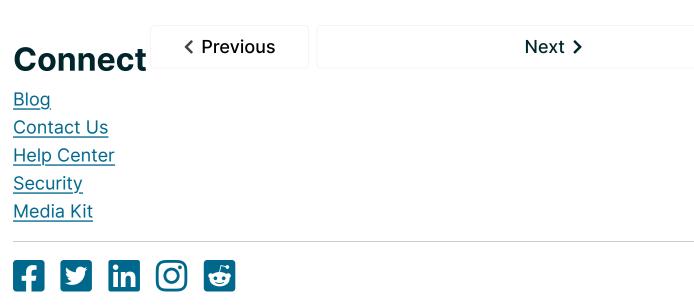
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