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Name: _____

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Worksheet 02 - MNIST type prediction challenge

Part 1

Please state the names of all the students you worked with on this assignment:

Answer Point Value: 0.0 points

Model Short Answer: -----

Part 2: Prediction challenge

You are given MNIST-type training data of images with handwritten digits. The data consists of training images with associated labels in $\{0, 1, \dots, 9\}$ and an unlabeled test set.

Your task is to train a neural network model of your choice to predict the digit from the image.

As a submission, please upload the prediction of digits for the test set. The tutorial is passed when you reach a prediction accuracy of 80%.

For the tutorial, be prepared to show your code, explain how you prepared the data, how you chose the network architecture and other hyperparameters, how you validated the model, and show the convergence of the training error.

To load and visualize the data, please refer to the following code

snippet: <https://gist.github.com/cwehmeyer/5af032463225ed5f18eaed63843091cc>

To get ideas for how to build and train a network, feel free to use any internet resource. You are free to use neural network structures that have not yet been discussed in the lecture.

Attachments

prediction-challenge-01-data.npz

Use your trained model to predict the digits for the test data. Store the prediction as shown in the following code

snippet, <https://gist.github.com/cwehmeyer/29fdcad6492cd4650a75c174bf910c5>, and upload your prediction file.

Please note that you need to use exactly the shown file format, file name, and array shape as shown in the code snippet. Otherwise, we might not be able to correctly process your submission.

Click "Browse" to locate your file and then click "Upload" to upload your file.

File:

Answer Point Value: 10.0 points