HW4: Handwritten Digits Classification

100/100 Points

10/30/2024

Attempt 1

Review Feedback
10/27/2024

Attempt 1 Score:
100/100

View Feedback

Anonymous Grading: **no**

Unlimited Attempts Allowed

Details

Homework 4: Handwritten digits classification using fully connected neural networks

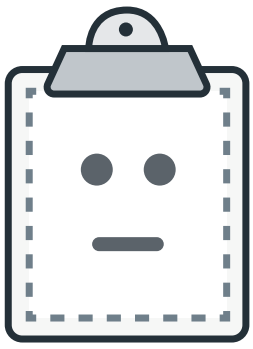
Build and train nn model to achieve the lowest error rate on the MNIST test set

- Build a fully connected neural network (fcnn) with at least one hidden layer
- Train the fcnn using (x_train_flat, y_train) and test the nn using (x_test_flat, y_test)
- Calculate and print out the error rate of the trained model on the test set
- You are free to all strategies you learned to improve the model performance

Grading:

- 100 pts: test_err <= 3%
  - 95 pts: test_err in (3%, 4%]
  - 90 pts: test_err in (4%, 5%]
  - 85 pts: test_err in (5%, 6%]
  - 80 pts: test_err in (6%, 8%]
  - 75 pts: test_err in (8%, 10%]
  - 70 pts: test_err in (10%, 12%]
  - 65 pts: test_err in (12%, 15%]
  - 60 pts: test_err in (15%, 20%]
  - <60 pts: test_err > 20%

Please use this code template to complete your code: **HW4_NN_MNIST_stu.ipynb (https://canvas.uidaho.edu/courses/30734/files/3542074?wrap=1)** **(https://canvas.uidaho.edu/courses/30734/files/3542074/download?download_frd=1)**



Preview Unavailable

HW4_NN_MNIST_stu_Andrew_Plum.ipynb

Download
(https://canvas.uidaho.edu/files/3554772/download?download_frd=1&verifier=rXdtM0oeSG9t7eaCUM0Rm57ChBkM7h49SAOiE37O)

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Attempt

(https://canvas.uidaho.edu/courses/30734/modules/items/11