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Programming Assignment 1

Click this link to download the [Nearest Neighbor MNIST notebook](#) and then complete problem 1.

Click this link to download the [Nearest Neighbor for Spine Injury notebook](#) and then complete problems 2-4.

Hello Verified Learners,

As part of the benefit to being a verified learner, the professor has created special notebooks in certain weeks where you can test your knowledge. These notebook are completely optional and do not count towards your grade in this course; however, it will help you understand the material better and give you hands on training.

[Download Notebook](#)

Problem 1

2/2 points (graded)

This problem is based on the Nearest Neighbor MNIST notebook. You will solve the problem while you are working through the notebook, and you should enter the solution here.

Find the nearest neighbor (in the training set) of test point 100.

a) What is the index of this training point?

✓ Answer: 4711

4711

b) What is the label of this training point?

✓ Answer: 4

Submit

i Answers are displayed within the problem

Problem 2

1/1 point (graded)

This and the next few problems are based on the Nearest Neighbor for Spine Injury notebook.

In the test set, which class (NO, DH, or SL) was most frequently misclassified by the L_1 -based nearest neighbor classifier?

☐ NO

☒ DH

☐ SL



Submit

Problem 3

1/1 point (graded)

In the test set, which class (NO, DH, or SL) was never misclassified by the L_2 -based nearest neighbor classifier?

☐ NO

☐ DH☒ SL

Problem 4

1/1 point (graded)

On how many of the test points did the two classification schemes (based on L_1 and L_2 distance) yield different predictions?



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