CS 760: Machine Learning

Spring 2024

Homework 5: Nearest Neighbors & Naive Bayes

AUTHORS: Jed Pulley

DO NOT POLLUTE! AVOID PRINTING, OR PRINT 2-SIDED MULTIPAGE.

Problem 5.1

- (a) See code in KNN.ipynb under Problem 5.1. I chose to implement K-Nearest Neighbors where K=5. I went this route since it's as simple as normal Nearest Neighbors to implement, but more robust.
- (b) I used *np.linalg.norm* to implement the euclidean distance. I chose the L2 norm because I find it to be more straightforward and intuitive, plus I'm much more used to using it from my previous Linear Algebra classes.
- (c)
- (d)
- (e)

Problem 5.2

- (a)
- (b)
- (c)
- (d)

Problem 5.3

Problem 5.4

Problem 5.5