

CS4361/5361 Machine Learning

Fall 2020

Logistic Regression

Exercise 1

1. Convert the code provided for logistic regression to a class containing the fit and predict functions as done for knn, naïve Bayes, and linear regression.
2. Compare the performance of Naïve Bayes and Logistic Regression to classify the MNIST dataset by modifying the provided *mnist_comparison.py* program.
3. Try to improve the performance of Logistic Regression by finding optimal parameter values, or, for extra credit, implementing one or more of the ideas in slide 19.