
Machine Learning Assignment 2

Simple Classifiers

1. Download the USPS data set from the Moodle Page together with a skeleton python file, named `assignment_NCC_stub.py`
2. Nearest Centroid Classifiers
 - a) Program an iteratively trained nearest centroid classifier (NCC) that classifies the digit **0** against all others
 - b) Train the NCC on 70% of the entire data set
 - c) In each iteration of the training phase store the prediction accuracy on the remaining 30% of the data (the test data set)
 - d) The NCC function should return the accuracy on the test data and the weight vector
 - e) Plot the accuracy as a function of iterations and plot the centroid of the digit **0** as an image

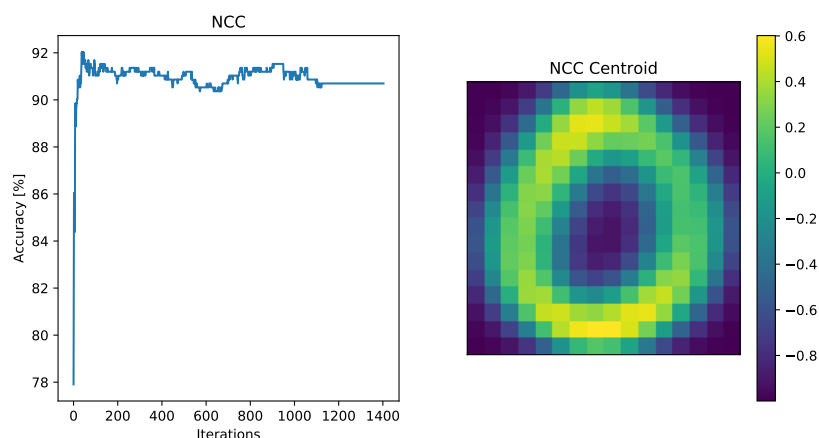


Figure 1: *Left*: Classification accuracy as function of iterations. *Right*: Weight vector for digit 0 plotted as image