

# CSE 847 (Spring 2019): Machine Learning— Homework 5

Xitong Zhang  
zhangxit@msu.edu

## 1 K-Means

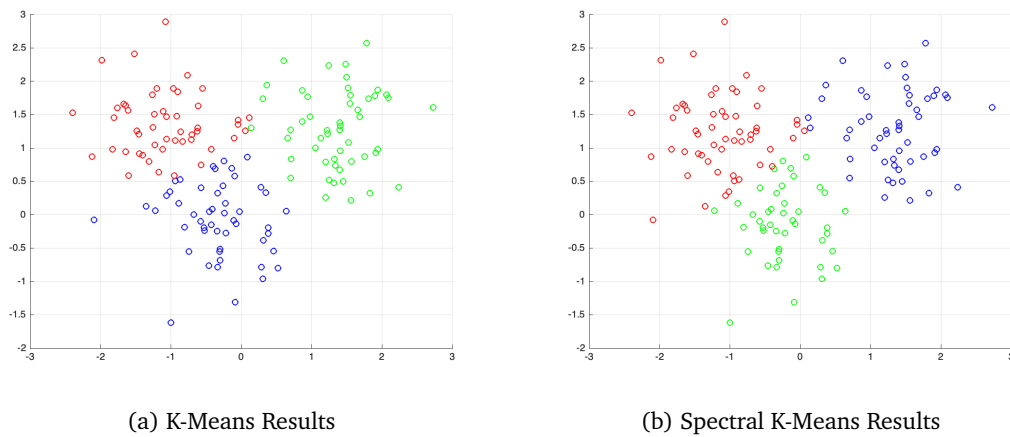


Figure 1: Clustering Visualization

## 2 PCA

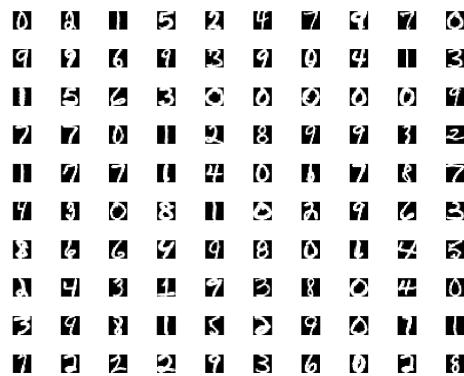
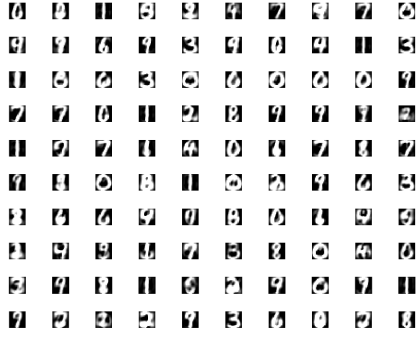
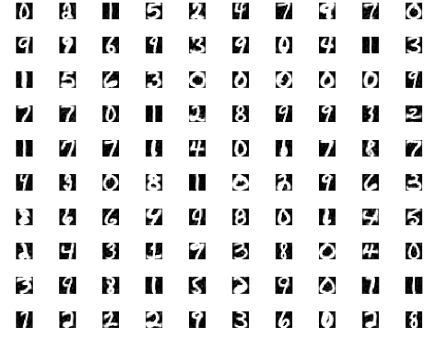


Figure 2: Raw images

This is my link: [Github](#).



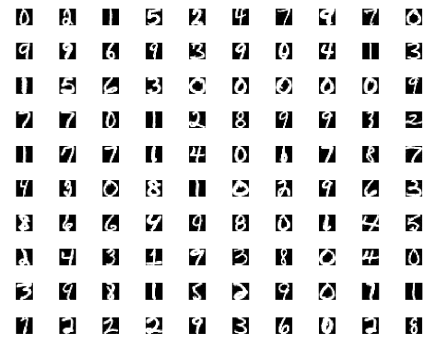
(a) 10 Principle Components, MSE: 612.7



(b) 50 Principle Components, MSE: 160.5



(a) 10 Principle Components, MSE: 55.9



(b) 50 Principle Components, MSE: 5.4