**ECE 8527: Introduction to
Machine Learning and Pattern Recognition**

# HW No. 8: K-NEAREST NEIGHBORS and k-means Clustering

Another short description ☺

Repeat HW #4 (LDA) for two new algorithms: k-Nearest Neighbors (KNN) and k-Means Clustering (KMN). For KNN, plot performance as a function of $k$, the number of nearest neighbors. For KMN, use the same number of clusters per class, and plot performance as a function of the number of clusters per class. Select the value for each that optimizes performance on /dev, and use this to classify /train, /dev and /eval. Add the results to your table produced for HW #4.

Discuss the differences in performance and analyze why these differences exist for each of the data sets processed.