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

# HW No. 9: K-NEAREST NEIGHBOR ALGORITHM

Another short description ☺

Classify the Yin-Yang data of HW #3 using a k-nearest-neighbor (kNN) algorithm. Plot error rate and compute time as a function of the value of k over a range of [1,1024] in powers of two for the overlap parameter in the range [-1,1] in steps of 0.2. The compute time plot only needs to be done for a value of 0 for the overlap parameter.

Note that you are going to classify points in the evaluation set based on nearest neighbors from the training set. Use a majority vote for the classification rule.

Do your results make sense? Compare them to your previous results on this data in a nicely formatted table. Pay attention to the number of significant digits in this table.