**CS 580L/436** **Homework 4**

Release Date: November 5, 2020

Due Date: 6:00PM, November 18, 2020

This homework provides an exercise on K-mean algorithm. Use the K-means algorithm to cluster the following eight 2-dimensional data points into three clusters. Use Euclidean distance as the distance function, and (2,3), (3,3), and (5,4) as the initial centroids (means). Show detailed steps: for each iteration, show the clusters formed, the new means, and also the Sum of Squared Error as defined in the lecture slides. (***You are highly recommended to write a program to do the computation and submit well-commented source code and program output of each iteration as the required detailed steps.*)**