Group Homework Credit Presentation

Group N

To Present November 30, 2023

Probabilistic and Fuzzy Clustering Algorithms

a) How does EM determine p(Cj|xi)---the probability that a point xi belongs to a cluster j? Give a verbal description how this probability is computed, outlining how cluster j’s cluster model parameters are used in this computation!

b) Let us assume we run Fuzzy C-means (FCM) for K=2 and the centroid for cluster 1 is (3,4) and the centroid of cluster 2 is (2,3) and hyper parameter p is 2 and we use Manhattan distance; furthermore, point i is: (2,2). Compute the wi1 and wi2 for point i!

c. What is the main difference between K-means and FCM?