

CSE708: Application of Data analytics and Engineering

Fall 2023

Assignment2: K-means Clustering

Due on Friday September 29, 2023, at 11:59PM

This assignment must be completed by hand calculations. Please don't use any programming language.

I would like to put eight data points into 3 different groups with groups: A(2, 10), B(2, 5), C(8, 4), D(5, 8), E(7, 5), F(6, 4), G(1, 2), H(4, 9).

Find the 3 groups using k-means algorithm after 2 iterations.

(Instructions: Consider C1=A, C2=D and C3=G as initial centers. And you must use Manhattan distance.)

Hint 1. Fill out this table and decide based on your results,

Hint 2. Recompute the new centers,

Hint 3. Repeat hint 1 basing on new centers.

Data Points	Distance from C1	Distance from C2	Distance from C3	It belongs to the cluster
A(2,10)				
B(2,5)				
C(8,4)				
D(5,8)				
E(7,5)				
F(6,4)				
G(1,2)				
H(4,9)				

Good Luck!