

CS 551 Statistical pattern recognition and learning

Exercises: Agglomerative Clustering

QUESTION 1

You are given the following 5 entities a, b, c, d, e. Apply agglomerative clustering using city block distance and complete linkage. Make the final dendrogram.

a	1	0	0	1	0	0	1
b	0	1	1	0	1	1	0
c	0	0	0	1	1	0	1
d	1	1	1	1	1	1	1
e	1	0	0	1	0	1	1

QUESTION 2

Repeat question 1 with Jaccard similarity metric and single linkage algorithm.

QUESTION 3

Use the similarity measure given by: $a+d$ and solve the above using complete linkage algorithm

QUESTION 4

Use similarity measure given by the dot product of two vectors and solve using average link algorithm.