Dr. Eick

Group Homework Credit Task Group J

**Cluster Validity**

*To be presented on Thursday, November 2, 2023*

Assume we obtain the following clustering

X={C1={(0, 0), (0, 1)}, C2={(5, 6), (6,6), (11, 11)}, C3= {(13,13), (14,12))},

consisting of 3 clusters containing 6 objects total, has been obtained.

**Tasks:**

1. Compute the silhouette coefficient for each point in the dataset (there are 7 of them)
2. Compute the average silhouette for each of the 3 clusters!
3. Compute the average silhouette of X!
4. Interpret the findings you obtained in steps 2-4
5. Next, assess the clustering quality with the correlation method; report the obtained correlation!
6. Next, move object {11,11} from cluster C2 to C3 obtaining a different clustering Y; how does the correlation computed in step 5 change?

Remark: Use Manhattan distance for all distance computations in the above tasks!