CMSC 476/676 Akarsh Kashamshetty

Spring 2021

Extra Credit Optional Homework

Hierarchical Agglomerative Clustering

Text, table

Description automatically generated

Use the similarity matrix C0 above for the following questions:

1. What is the first cluster to be formed using Single Linkage from this matrix of similarity scores?
   1. 4, 3
   2. 5, 3
   3. 2, 1
   4. 5, 1
   5. None of the above

Answer \_\_B\_\_\_\_\_

1. What is the second cluster to be formed using Single Linkage from the updated matrix of similarity scores?
   1. (4,3)2
   2. (5,3)4
   3. (2,1)5
   4. (5,4)3
   5. None of the above

Answer \_\_\_B\_\_\_\_

1. What is the final cluster to be formed using Single Linkage after updating the matrix of similarity scores?
   1. ((((5,3)4)2)1)
   2. ((((4,3)2)5)1)
   3. ((((2,1)5)4)3)
   4. ((((5,4)3)2)1)
   5. None of the above

Answer \_\_\_A\_\_\_\_

Table

Description automatically generated with medium confidence

Use the similarity matrix C0 above for the following questions:

1. What is the first cluster to be formed using Complete Linkage from this matrix of similarity scores?
   1. 4, 3
   2. 5, 3
   3. 2, 1
   4. 5, 1
   5. None of the above

Answer \_\_\_C\_\_\_\_

1. What is the second cluster to be formed using Complete Linkage from the updated matrix of similarity scores?
   1. (4,3)2
   2. (5,3)4
   3. (2,1)5
   4. (5,4)3
   5. None of the above

Answer \_\_C\_\_\_\_\_

1. What is the final cluster to be formed using Complete Linkage after updating the matrix of similarity scores?
   1. ((((5,3)4)2)1)
   2. ((((4,3)2)5)1)
   3. ((((2,1)5)3)4)
   4. ((((5,4)3)2)1)
   5. None of the above

Answer \_\_\_C\_\_\_\_