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USL Quiz

Type	:	Graded Quiz
Attempts	:	1/1
Questions	:	20
Time	:	40m
Due Date	:	May 30, 11:00 PM
Your Score	:	9/20

Instructions



Attempt History

Attempt #1

Marks: 9

May 29, 1:02 PM



Q No: 1

Correct Answer

Euclidean distance is

 $(x_2 - x_1)^2 + (y_2 - y_1)^2$ $(x_2 - x_1) + (y_2 - y_1)$ Square root of $((x_2 - x_1)^2 + (y_2 - y_1)^2)$

You Selected

 None

Q No: 2**Incorrect Answer**

PCA is used when the data is:

 Categorical Multi-variate**You Selected** Multi-variate and numeric Continuous and Categorical None**Q No: 3****Incorrect Answer**

We need to choose centroid values in Hierarchical clustering

 True**You Selected** False**Q No: 4****Correct Answer**

Which one of the following technique is not require the variables to be separated as dependent or independent?

 Regression Classification Clustering**You Selected**

Boosting**Q No: 5****Incorrect Answer**

PCA does not work on which of the following?

 Categorical Variables Numerical Variables On 4D datasets**You Selected** Large datasets**Q No: 6****Incorrect Answer**

Which of the following is not true for a scree plot?

 Gives us the explained variance of PCA It is the graph between number of components and explained variance It is similar to a knee plot All**You Selected****Q No: 7****Correct Answer**

Generally, in PCA there is no information loss. Is this statement correct?

 True False**You Selected**

Q No: 8**Correct Answer**

If the linkage used is “Ward”, what will be the default affinity?

 Euclidean

You Selected

 Chebyshev Jaccard Manhattan**Q No: 9****Correct Answer**

Elbow graph is drawn between which two parameters ?

 K Vs Sum of square error within cluster

You Selected

 K vs Silhouette score K vs sum of square of distance between the point from one cluster to other K Vs Manhattan distance**Q No: 10****Correct Answer**

Compute the Chebyshev distance between the points (6,3,8) and (9,1,4).

2 3 4

You Selected

 6**Q No: 11**

Incorrect Answer

Say the distance between cluster B and C is 3 and between D and C is 7, then what is the distance between the cluster BD and C using single link method ?

 7

You Selected

 3.5 5 3**Q No: 12**

Incorrect Answer

Which of the following is not true about Hierarchical clustering?

 The minimum time complexity of $O(n^2 \log n)$ is required This works on the principle of centroid updation at every iteration It cannot undo what was done previously

You Selected

- Agglomerative clustering is Hierarchical approach

Q No: 13

Correct Answer

What is the characteristic of first principle component (PC1) ?

- Eigen value of the PC1 is less than PC2

- The first principal component direction of the data is that along which the observations vary the most.

You Selected

- The explained variance of PC1 is less than PC2

- The PC1 exist in parallel to PC2

Q No: 14

Incorrect Answer

Say the variation for PC1 is 15 and variation for PC2 is 3. How much variation of the data is explained by the PC2 ? Consider it models by only two PCs

- 17%

- 89%

You Selected

- 93%

- 83%

Q No: 15

Incorrect Answer

Say the distance between cluster B and A is 30 and between D and A is 20, then what is the distance between the cluster BD and A using average link method ?

30 35

You Selected

 25 20**Q No: 16**

Incorrect Answer

How do we obtain a Cophenetic matrix?

 Fill the lower triangular distance matrix with maximum merging distance Fill the lower triangular distance matrix with minimum merging distance Fill the upper triangular distance matrix with average merging distance

You Selected

 Fill the upper triangular distance matrix with maximum merging distance**Q No: 17**

Incorrect Answer

Compute the distance between cluster ((A,B),E) and cluster C using single linkage

Distance between (A,B) and C=2

Distance between (A,B) and E=1.5

Distance between C and B=3,

Distance between E and C=5,

2 3 5

You Selected

 3.3**Q No: 18**

Correct Answer

What is the mathematical expression for Silhouette score?

 $(p-q)/\max(p,q)$ where p = inter cluster point distances and q is the intra cluster points distances

You Selected

 $(p-q)/\min(p,q)$ where p = inter cluster point distances and q is the intra cluster points distances $(p-q)/\min(p,q)$ where p = intra cluster point distances and q is the inter cluster points distances $(p-q)/\max(p,q)$ where p = intra cluster point distances and q is the inter cluster points distances**Q No: 19**

Correct Answer

Find the euclidian distance between the points (2,4,0) and (4,2,1)

4 2.86 3

You Selected

 3.36**Q No: 20**

Incorrect Answer

Say the normalized loading vector for PC1 is given as $[x_1, x_2, x_3]$. Which of the following statement is True?

 $x_1^2 + x_2^2 + x_3^2 = 1$ $\sqrt{x_1^2 + x_2^2 + x_3^2} = 1$ $x_1 = x_2 = x_3$

You Selected

 $x_{12} + x_{22} + x_{32} = 0$

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