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## Quiz 2 - Dimensionality reduction

Type	:	Graded Quiz
Attempts	:	1/1
Questions	:	10
Time	:	15m
Due Date	:	Nov 17, 11:59 PM IST
Your Marks	:	10/10

Instructions



### Attempt History

Attempt #1

Nov 05, 2:13 PM

Marks: 10



Q No: 1

Correct Answer

Marks: 1/1

In PCA, the number of components is \_\_\_\_\_ to the number of independent variables.

☒ Less than or equal

You Selected

☐ Greater than

☐ Less than

☐ Greater than or equal to

Q No: 2

Correct Answer

Marks: 1/1

Which of the following statements are correct

- (i) LDA specifically tries to model the difference between the classes of the data.
- (ii) On the other hand, the PCA does not take any class difference into account.

☒ Both (i) and (ii) are correct

You Selected

☐ Only (i) is correct

☐ Only (ii) is correct

☐ Both (i) and (ii) are incorrect

Q No: 3

Correct Answer

Marks: 1/1

\_\_\_\_\_ is known to have a practical use as a binary as well as multiclass classifier.

☒ LDA

You Selected

☐ PCA

☐ Both PCA and LDA

☐ None

Q No: 4

Correct Answer

Marks: 1/1

The elbow point in the scree plot corresponds to the optimal number of components

☒ True

You Selected

☐ False

☐ No answer text provided.

☐ No answer text provided.

Q No: 5

Correct Answer

Marks: 1/1

\_\_\_\_\_ is described as a dimensionality reduction technique.

☒ Both PCA and LDA

You Selected

☐ PCA

☐ LDA

☐ LDC

Q No: 6

Correct Answer

Marks: 1/1

Which of the following statement is TRUE about Linear Discriminative Analysis ?

☒ LDA objective is to maximize the distance between the target classes and minimize the distance within classes

You Selected

☐ minimize both distance between class and distance within class

☐ maximize both distance between class and distance within class

☐ LDA objective is to minimize the distance between the target classes and maximize the distance within classes

Q No: 7

Correct Answer

Marks: 1/1

Which of the following are the different criterias to select the best principal components?

☒ Both Scree Plot and Kaiser Criterion

You Selected

☐ Scree Plot

☐ Kaiser Criterion

☐ None of the given options

Q No: 8

Correct Answer

Marks: 1/1

Which of the following statements are TRUE about PCA?

1. PCA is unsupervised approach
2. PCA select only the significant features from all the features
3. PCA helps in removing redundant feature dimensions and select the unique features
4. PCA can be used for prediction

☒ A and C

You Selected

☐ A and B

☐ A, B and C

☐ B and C

Q No: 9

Correct Answer

Marks: 1/1

When to use PCA?

☒ You want to find latent features and reduce dimensionality

You Selected

☐ When my data is small and with a few features

☐ When I have a overfit case

☐ Everytime before uses a Machine Learning algorithm

Q No: 10

Correct Answer

Marks: 1/1

Principal components are always \_\_\_\_ to each other.

☒ Orthogonal

You Selected

☐ Parallel

☐ Horizontal

☐ None of the above

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