PCA- QUIZ

Total points 10/10

Unit- 6

Email address *

ameythakur@ternaengg.ac.in

Name *

AMEY THAKUR

RollNo *

50

Division *

- [ ] A
- [x] B
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✓ Which of the following algorithms cannot be used for reducing the dimensionality of data? * 1/1

- ○ t-SNE
- ○ PCA
- ○ LDA False
- ◉ None of these ✓

✓ PCA can be used for projecting and visualizing data in lower dimensions. * 1/1

- ☑ True ✓
- ☐ False

✓ Suppose we are using dimensionality reduction as pre-processing technique, i.e, instead of using all the features, we reduce the data to k dimensions with PCA. And then use these PCA projections as our features. Which of the following statement is correct? * 1/1

- ☐ Higher 'k' means more regularization
- ☑ Higher 'k' means less regularization ✓
- ☐ Can't Say

✓ Which of the following statement is true for a t-SNE cost function? * 1/1

- ○ It is asymmetric in nature.
- ◉ It is symmetric in nature ✓
- ○ It is same as the cost function for SNE.

✓ Imagine you are dealing with text data. To represent the words you are using word embedding (Word2vec). In word embedding, you will end up with 1000 dimensions. Now, you want to reduce the dimensionality of this high dimensional data such that, similar words should have a similar meaning in nearest neighbor space.In such case, which of the following algorithm are you most likely choose? * 1/1

- ◉ t-SNE ✓
- ○ PCA
- ○ LDA
- ○ None of these

✓ In which of the following case LDA will fail? * 1/1

- ◉ If the discriminatory information is not in the mean but in the variance of the data ✓
- ○ If the discriminatory information is in the mean but not in the variance of the data
- ○ If the discriminatory information is in the mean and variance of the data
- ○ None of these

✓ Which of the following comparison(s) are true about PCA and LDA?Both LDA and PCA are linear transformation techniquesLDA is supervised whereas PCA is unsupervisedPCA maximize the variance of the data, whereas LDA maximize the separation between different classes, * 1/1

- ○ 1 and 2
- ○ 2 and 3
- ○ 1 and 3
- ○ Only 3
- ◉ 1, 2 and 3 ✓

✓ What will happen when eigenvalues are roughly equal? * 1/1

- ○ PCA will perform outstandingly
- ◉ PCA will perform badly ✓
- ○ Can't Say
- ○ None of above

✓ PCA works better if there is?A linear structure in the datalf the data lies on a curved surface and not on a flat surfacelf variables are scaled in the same unit * 1/1

- ○ 1 and 2
- ○ 2 and 3
- ◉ 1 and 3 ✓
- ○ 1 ,2 and 3

✓ Which of the following method would result into better class prediction? 1/1

- ○ Building a classification algorithm with PCA (A principal component in direction of PCA)
- ◉ Building a classification algorithm with LDA ✓
- ○ Can't say
- ○ None of these