Advantages and Disadvantage of LDA

Q/

Advantages of LDA

1/ LDA minimizes variance in the dataset by reducing the number of features

2/ It is use to reduces dimensionality by effectively reducing the high-dimensional data into low-dimensional feature space.

Disadvantages of LDA

1/ Makes assumption requires features to be normally distributed.

2/ Does not give good results in case of unbalanced dataset.

3/ Not suitable for non-linear problem.

4/ Prone to overfitting.

Q/ Manifold learning.

Ans/ It is a subset of machine learning based on the assumption that one's observed data lies in a low dimension manifold embedded in a high dimentional space.

Q/ Matrix learning.

Ans/ It is a approach based on distance matrix aim to find similary and disimilarity between data points. It a non-negative function b/w 2 points x and y. That is the distance b/w two points.

Types of Matrix:-

1/ Euclidian matrix

2/ Discrete matrix

3/ Mahalanobis matrix

Q/ Hyper parameters of optimization.

Ans/ 1/ Epoch
2/ Sample
3/ Batch
4/ Learning rate
5/ Cost function / Loss function
6/ Weight / Bias.

Q/ STN [Spatial transformer networks]

Ans/ Spatial transformer networks are a generalization of differentiable attention to any spatial transformation. Spatial transformer networks allow a neural network to learn how to perform spatial transformations on the input image in order to enhance the geometric invariance of the model.

Q/ Deep reinforcement learning.

Ans/ Deep reinforcement learning is a category of machine learning and artificial intelligence where intelligent ~~machine~~ machines can learn from their actions similar to the way humans learn from experience.

Q/ Auto encoder.

Ans/ It is a unsupervised learning algorithm.
It compresses the input data to lower dimension and then reconstructs the input back.