

Machine Learning Assignment-3

1. D
2. A
3. D
4. B
5. A
6. B
7. D
8. A
9. A
10. B
11. A
12. B
13.
 - i. Clustering helps in restarting the local search procedure and remove the inefficiency. In addition, clustering helps to determine the internal structure of the data.
 - ii. Clustering has been used for model analysis, vector region of attraction.
 - iii. Clustering helps in understanding the natural grouping in a dataset. Their purpose is to make sense to partition the data into some group of logical groupings.
 - iv. They play a wide role in applications like marketing economic research and weblogs to identify similarity measures, image processing and spatial research.
 - v. Clustering is also used in outlier detections to detect credit card fraudulence.
14.
 - i. Graph based clustering performance can easily be improved by applying ICA blind source separation during the graph Laplacian embedding step.
 - ii. Applying unsupervised feature learning to input data using either RICA or SFT, improves clustering performance.
 - iii. For some cases, high clustering performance can be achieved by simply performing K-means clustering on the ICA components after PCA dimension reduction on the input data.