

1. D
2. D
3. C
4. B
5. D
6. C
7. D
8. C
9. B
10. A

13. Clustering is a type of unsupervised learning method of machine learning. In the unsupervised learning method, the inferences are drawn from the data sets which do not contain labelled output variable. It is an exploratory data analysis technique that allows us to analyze the multivariate data sets.

Clustering is a task of dividing the data sets into a certain number of clusters in such a manner that the data points belonging to a cluster have similar characteristics. Clusters are nothing but the grouping of data points such that the distance between the data points within the clusters is minimal. Clustering is done to segregate the groups with similar traits.

14. Clustering is an unsupervised machine learning methodology that aims to partition data into distinct groups, or clusters. There are a few different forms including hierarchical, density, and similarity based. Each have a few different algorithms associated with it as well. One of the hardest parts of any machine learning algorithm is feature engineering, which can especially be difficult with clustering as there is no easy way to figure out what best segments your data into separate but similar groups.

The guiding principle of similarity based clustering is that similar objects are within the same cluster and dissimilar objects are in different clusters. This is not different than the goal of most conventional clustering algorithms. With similarity based clustering, a measure must be given to determine how similar two objects are. This similarity measure is based off distance, and different distance metrics can be employed, but the similarity measure usually results in a value in $[0,1]$ with 0 having no similarity and 1 being identical. To measure feature weight importance, we will have to use a weighted euclidean distance function.