

Machine Learning Assignment-2

1. A
2. D
3. A
4. A
5. B
6. B
7. A
8. D
9. A
10. D
11. D
12. The *K*-means clustering algorithm is sensitive to outliers, because a mean is easily influenced by extreme values. *K*-medoids clustering is a variant of *K*-means that is more robust to noises and outliers. Instead of using the mean point as the center of a cluster, *K*-medoids uses an actual point in the cluster to represent it. Medoid is the most centrally located object of the cluster, with minimum sum of distances to other points.
13. The *K* means clustering algorithm is used to find groups which have not been explicitly labeled in the data. This can be used to confirm business assumptions about what types of groups exists or to identify unknown groups in complex data sets.
14. *K* means starts with a random set of data points as initial centroids. This random selection influences the quality of the resulting clusters. Besides, each run of the algorithm for the same dataset may yield a different output.