

Worksheet-2 Machine Learning

Q1 to Q11

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

Q12 to Q14

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.
13. Guarantees convergence. Can warm-start the positions of centroids. Easily adapts to new examples. Generalizes to clusters of different shapes and sizes, such as elliptical clusters.
14. The non-deterministic nature of K-Means is due to its random selection of data points as initial centroids. Method: We propose an improved, density-based version of K-Means, which involves a novel and systematic method for selecting initial centroids.