

MACHINE LEARNING

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Q1 to Q12 have only one correct answer. Choose the correct option to answer your question.

- 1) Movie Recommendation systems are an example of:**
d) 2 and 3
- 2) Sentiment Analysis is an example of:**
d) 1, 2 and 4
- 3) Can decision trees be used for performing clustering?**
a) True
- 4) Which of the following is the most appropriate strategy for data cleaning before performing clustering analysis, given less than desirable number of data points:**
a) 1 only
- 5) What is the minimum no. of variables/ features required to perform clustering?**
b) 1
- 6) For two runs of K-Mean clustering is it expected to get same clustering results?**
b) No
- 7) Is it possible that Assignment of observations to clusters does not change between successive iterations in K-Means?**
a) Yes
- 8) Which of the following can act as possible termination conditions in K-Means?**
d) All of the above

9)

10) Which of the following algorithms is most sensitive to outliers?

a) K-means clustering algorithm

11) How can Clustering (Unsupervised Learning) be used to improve the accuracy of Linear Regression model (Supervised Learning):

d) All of the above

12) What could be the possible reason(s) for producing two different dendrograms using agglomerative clustering algorithms for the same dataset?

d) All of the above

Q13 to Q15 are subjective answers type questions, Answers them in their own words briefly

13) Is K sensitive to outliers?

Yes, K-means is sensitive outliers because K-means algorithms update the centroids by taking the mean of all the data points closer to the centroid and the mean is affected by extreme values.

14) Why is K means better?

K-means is better when it comes to dealing with large datasets. It becomes a great solution for pre-clustering, representing large data space into disjoint smaller subspace.

15) Is K means a deterministic algorithm?

No, Kmeans is a non-deterministic algorithm. It can give different results due to random selection of initial points as centroids.