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Unit 10 - Week 8

Course outline

How does an NPTEL online course work?

Week 0

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

☐ K - Nearest Neighbors (kNN) (unit? unit=64&lesson=65)

☐ K - Nearest Neighbors implementation in R (unit? unit=64&lesson=66)

Practice Assignment 8

The due date for submitting this assignment has passed. **Due on 2020-03-25, 23:59 IST.**
As per our records you have not submitted this assignment.

Note : This assignment is only for practice purpose and it will not be counted towards the Final score

1) The most commonly used distance metric to calculate distance between centroid of each cluster and data points in K-means algorithm is **1 point**

- ☐ Chebyshev distance
- ☐ Manhattan
- ☐ Euclidean distance
- ☐ None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Euclidean distance

2) K means clustering classifies variables based on :- **1 point**

- ☐ dependent and independent variables
- ☐ the eigen values
- ☐ distance between the points and a cluster centre
- ☐ None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
dependent and independent variables

3) Which of the following statement is **NOT TRUE** about kNN algorithm? **1 point**

☐ K - means Clustering (unit? unit=64&lesson=67)

☐ K - means implementation in R (unit? unit=64&lesson=68)

☐ FAQ (unit? unit=64&lesson=69)

☐ Data Science for engineers - Summary (unit? unit=64&lesson=70)

☒ Week 8 data set (unit? unit=64&lesson=71)

☐ **Quiz : Practice Assignment 8 (assessment? name=97)**

☐ Quiz : Assignment 8 (assessment? name=127)

☐ Week 8 Feedback (unit? unit=64&lesson=129)

☒ Solution - Assignment 8 (unit? unit=64&lesson=131)

Text Transcripts

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- ☐ It is a non-parametric algorithm
- ☐ It is an instance based learning algorithm
- ☐ Explicit training and testing phases are involved while implementing kNN
- ☐ None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

Explicit training and testing phases are involved while implementing kNN

4) Scaling is important in distance-based algorithms because

1 point

- ☐ variables with higher magnitude will influence the results more
- ☐ distance calculations are affected by the magnitude of the variables
- ☐ The data is large and has many features
- ☐ Both A and B

No, the answer is incorrect.

Score: 0

Accepted Answers:

variables with higher magnitude will influence the results more

5) Which of the following is TRUE with respect to K means clustering?

1 point

- ☐ The inter cluster distance is minimized and intra cluster distance is maximized
- ☐ The inter cluster distance is maximized and intra cluster distance is minimized
- ☐ Both inter cluster and intra cluster distance are minimized
- ☐ Both inter cluster and intra cluster distance are maximized

No, the answer is incorrect.

Score: 0

Accepted Answers:

The inter cluster distance is maximized and intra cluster distance is minimized

