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Remaining Time: 43 minutes, 11 seconds.

Question Completion Status:

Test Information

Description	
Instructions	
Timed Test	This test has a time limit of 1 hour.This test will save and submit automatically when the time expires. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.
Multiple Attempts	This test allows multiple attempts.
Force Completion	This test can be saved and resumed at any point until time has expired. The timer will continue to run if you leave the test.
	Your answers are saved automatically.

QUESTION 1

10 points Saved

What is the final selected number of clusters identified by the kmeans() function when using the training data?

4

QUESTION 2

10 points Saved

What is the final selected number of clusters identified by the hclust() function when using the training data?

4

QUESTION 3

10 points Saved

What is the final within-group error-sum-of-squares value for the

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Remaining Time: 43 minutes, 11 seconds.

What is the final within-group error-sum-of-squares value for the selected number of hclust() clusters when using the training data? (Show at least 1 decimal place.)

QUESTION 5

10 points Saved

What is the proportion agreement in cluster assignment between the final kmeans() and the final hclust() allocations? (0<=x<=1, at least 3 decimal places)

0.9455072

QUESTION 6

10 points Save Answer

What is the proportion of agreement between the original kmeans() cluster assignments for the training data and the Mahalanobis distance cluster assignments for the same training data? (0<=x<=1, at least 3 decimal places)

QUESTION 7

10 points Save Answer

What is the proportion of agreement between the original hclust() cluster assignments for the training data and the Mahalanobis distance cluster assignments for the same training data? (0<=x<=1, at least 3 decimal places)

QUESTION 8

10 points Save Answer

When using Mahalanobis distance to assign the original training data into the kmeans() clusters, what is the empirical probability estimate of a p-value of less than or equal to 0.05? (at least 3 decimal places)

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

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QUESTION 10 **10 points** Save Answer

When using Mahalanobis distance to assign the testing data into the kmeans() clusters, what is the empirical probability estimate of a p-value of less than or equal to 0.05? (at least 2 decimal places)

QUESTION 11 **10 points** Save Answer

When using Mahalanobis distance to assign the testing data into the hclust() clusters, what is the empirical probability estimate of a p-value of less than or equal to 0.05? (at least 2 decimal places)

QUESTION 12 **10 points** Save Answer

The distribution of the Mahalanobis p-values obtained when mapping the testing data into the kmeans() defined clusters indicates:

- ◯ a reasonably uniform distribution on the interval from 0 to 1
- ◯ a perfectly uniform distribution on the interval from 0 to 1
- ◯ a Chi-squared distribution with df=5
- ◯ a Chi-squared distribution with df=4
- ◯ a non-uniform distribution on the interval from 0 to 1, weighted toward small values

QUESTION 13 **10 points** Save Answer

The distribution of the Mahalanobis p-values obtained when mapping the testing data into the hclust() defined clusters indicates:

- ◯ a non-uniform distribution on the interval from 0 to 1, weighted toward small values
- ◯ a perfectly uniform distribution on the interval from 0 to 1

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

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The distribution of the Mahalanobis p-values obtained when mapping the testing data into the kmeans() defined clusters indicates we should:

- ◯ continue using the existing cluster structure on new data
- ◯ not continue using the existing cluster structure on new data
- ◯ none of the other answers
- ◯ consider the existing cluster structure to be immutable

QUESTION 15

10 points Save Answer

The distribution of the Mahalanobis p-values obtained when mapping the testing data into the hclust() defined clusters indicates we should:

- ◯ none of the other answers
- ◯ consider the existing cluster structure to be immutable
- ◯ not continue using the existing cluster structure on new data
- ◯ continue using the existing cluster structure on new data

Click Save and Submit to save and submit. Click Save All Answers to save all answers.