Congratulations! You passed!
TO PASS 80% or higher

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GRADE
100%

Regression, Cluster Analysis, & Association Analysis

LATEST SUBMISSION GRADE
100%

1. What is the main difference between classification and regression? **1 / 1 point**

- In classification, you're predicting a categorical variable, and in regression, you're predicting a nominal variable.
- (selected) In classification, you're predicting a category, and in regression, you're predicting a number.
- There is no difference since you're predicting a numeric value from the input variables in both tasks.
- In classification, you're predicting a number, and in regression, you're predicting a category.

Correct
That's correct!

2. Which of the following is NOT an example of regression? **1 / 1 point**

- Estimating the amount of rain
- Predicting the demand for a product
- (selected) Determining whether power usage will rise or fall
- Predicting the price of a stock

Correct
That's correct!

3. In linear regression, the least squares method is used to **1 / 1 point**

- Determine how to partition the data into training and test sets.
- Determine the distance between two pairs of samples.
- Determine whether the target is categorical or numerical.
- (selected) Determine the regression line that best fits the samples.

Correct
That's correct!

4. How does simple linear regression differ from multiple linear regression? **1 / 1 point**

- (selected) In simple linear regression, the input has only one variable. In multiple linear regression, the input has more than one variables.
- They are the just different terms for linear regression with one input variable.
- In simple linear regression, the input has only categorical variables. In multiple linear regression, the input can be a mix of categorical and numerical variables.
- In simple linear regression, the input has only categorical variables. In multiple linear regression, the input has only numerical variables.

Correct
That's correct!

5. The goal of cluster analysis is **1 / 1 point**

- To segment data so that differences between samples in the same cluster are maximized and differences between samples of different clusters are minimized.
- To segment data so that all samples are evenly divided among the clusters.
- To segment data so that all categorical variables are in one cluster, and all numerical variables are in another cluster.
- (selected) To segment data so that differences between samples in the same cluster are minimized and differences between samples of different clusters are maximized.

✓ **Correct**
That's correct!

6. Cluster results can be used to **1 / 1 point**

- (•) All of these choices are valid uses of the resulting clusters.
- ( ) Create labeled samples for a classification task
- ( ) Segment the data into groups so that each group can be analyzed further
- ( ) Determine anomalous samples
- ( ) Classify new samples

✓ **Correct**
That's correct!

7. A cluster centroid is **1 / 1 point**

- ( ) The mean of all the samples in the two farthest clusters.
- ( ) The mean of all the samples in all clusters
- ( ) The mean of all the samples in the two closest clusters.
- (•) The mean of all the samples in the cluster

✓ **Correct**
That's correct!

8. The main steps in the k-means clustering algorithm are **1 / 1 point**

- ( ) Calculate the centroids, then determine the appropriate stopping criterion depending on the number of centroids.
- (•) Assign each sample to the closest centroid, then calculate the new centroid.
- ( ) Calculate the distances between the cluster centroids, then find the two closest centroids.
- ( ) Count the number of samples, then determine the initial centroids.

✓ **Correct**
That's correct!

9. The goal of association analysis is **1 / 1 point**

- ( ) To find the most complex rules to explain associations between as many items as possible in the data.
- (•) To find rules to capture associations between items or events
- ( ) To find the number of clusters for cluster analysis
- ( ) To find the number of outliers in the data

✓ **Correct**
That's correct!

10. In association analysis, an item set is **1 / 1 point**

- ( ) A set of transactions that occur a certain number of times in the data
- ( ) A set of items that infrequently occur together
- ( ) A set of items that two rules have in common
- (•) A transaction or set of items that occur together

✓ **Correct**
That's correct!

11. The support of an item set **1 / 1 point**

- (•) Captures the frequency of that item set
- ( ) Captures how many times that item set is used in a rule
- ( ) Captures the number of items in that item set
- ( ) Captures the correlation between the items in that item set

Correct
That's correct!

12. Rule confidence is used to

1 / 1 point

- (●) Prune rules by eliminating rules with low confidence
- ( ) Measure the intuitiveness of a rule
- ( ) Determine the rule with the most items
- ( ) Identify frequent item sets

Correct
That's correct!