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NPTEL

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Courses » Business analytics and data mining Modeling using R

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Unit 6 - Week 5

Register for Certification exam

Course outline

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● Lecture 21 PREDICTION PERFORMANCE

● Lecture 22 MULTIPLE LINEAR REGRESSION

● Lecture 23 MULTIPLE LINEAR REGRESSION PART-2

● Lecture 24 MULTIPLE LINEAR REGRESSION PART-3

● Lecture 25 MULTIPLE LINEAR REGRESSION

Assignment 5

The due date for submitting this assignment has passed.
As per our records you have not submitted this **Due on 2019-03-06, 23:59 IST.**
assignment.

1) Which of the following metrics measures the 'goodness of fit' of a regression model?   **1 point**

○ Mean absolute deviation

○ Root mean squared error

○ R-squared

○ Total sum of squared errors

No, the answer is incorrect.
Score: 0

Accepted Answers:
R-squared

2) In data mining modeling, the prediction error for performance evaluation is typically   **1 point**
computed on:

○ Training partition

○ Validation partition

○ Test partition

○ None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Validation partition

3) In the case of prediction, if the overall average error is negative, what does it indicate?   **1 point**

○ On an average level, the model is over predicting the observations

○ On an average level, the model is under predicting the observations

○ On an average level, the model is correctly predicting the observations

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actual values?

○ MAE

○ RMSE

○ MAPE

○ SSE

No, the answer is incorrect.
Score: 0

Accepted Answers:
MAPE

5) The primary objective of predictive modeling in multiple linear regression is to: *1 point*

○ Fit the data closely

○ Estimate values of outcome variable for new records accurately

○ Understand the relationship between outcome variable and predictors

○ All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Estimate values of outcome variable for new records accurately

6) Select the correct option with respect to OLS (Ordinary Least Squares):   *1 point*

○ OLS computes the sample estimates which minimizes the sum of deviations between predicted and actual values

○ OLS computes the sample estimates which maximizes the sum of deviations between predicted and actual values

○ OLS computes the sample estimates which minimizes the sum of squared deviations between predicted and actual values

○ OLS computes the sample estimates which maximizes the sum of squared deviations between predicted and actual values

No, the answer is incorrect.
Score: 0

Accepted Answers:
OLS computes the sample estimates which minimizes the sum of squared deviations between predicted and actual values

7) Consider the following statements and select the correct option: *1 point*

Assertion (A): The multiple linear regression assumption of 'noise following a normal distribution' must hold true in statistical modeling.
Reason (R): In statistical modeling, the same sample is used to fit the model as well as assess its reliability.

○ Both A and R are correct and R is the correct explanation of A

○ Both A and R are correct but R is not the correct explanation of A

○ A is correct but R is incorrect

○ A is incorrect but R is correct

No, the answer is incorrect.
Score: 0

Accepted Answers:

Both A and R are correct and R is the correct explanation of A

8) Which among the following statements is incorrect with respect to explanatory modeling? **1 point**

○ The model selected may not have the best predictive accuracy

○ Full sample is used to estimate the model

○ Performance metrics measure how closely the model fits the data

○ No previously assumed structure is hypothesized

No, the answer is incorrect.
Score: 0

Accepted Answers:
No previously assumed structure is hypothesized

9) The phenomenon of two or more predictors sharing the same linear relationship with the **1 point**
outcome variable is termed as:

○ Parsimony

○ Multicollinearity

○ Variability

○ Homoskedasticity

No, the answer is incorrect.
Score: 0

Accepted Answers:
Multicollinearity

10) Consider the following scenario: A retail store estimated the sales of a new variety of biscuit **1 point**
for the coming week to be 575 units. If the actual sales of the product amounted to 435 units, compute
the prediction error.

○ 140

○ -140

○ 505

○ -70

No, the answer is incorrect.
Score: 0

Accepted Answers:
-140

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