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Course Content

Linear Regression Quiz

Type	:	Graded Quiz
Attempts	:	1/1
Questions	:	10
Time	:	45m
Due Date	:	Dec 13, 11:59 PM
Your Score	:	7/10

Instructions

Attempt History

Date	Attempt	Marks	
Dec 13, 9:17 PM	1	7	Hide answers

Question No: 1 Correct Answer

Multi-collinearity happens when

- (●) One or more predictors have high correlation among them — You Selected
- ( ) The response is highly correlated with the predictors
- ( ) The residuals are correlated among themselves
- ( ) The observed values are not independent

Question No: 2 Correct Answer

Which one of the statements is true regarding residuals in regression analysis?

- (●) Mean of residuals is always zero — You Selected
- ( ) Mean of residuals is always less than zero
- ( ) Mean of residuals is always greater than zero
- ( ) There is no such rule for residuals

Question No: 3 Correct Answer

Which of the following is a measure of multicollinearity?

- (●) VIF — You Selected
- ( ) R Squared
- ( ) MSE
- ( ) Regression Residuals

Question No: 4 Correct Answer

To test the linear relationship of y(dependent) and x(independent) continuous variables, which of the following plot is best suited?

- (●) Scatter plot — You Selected
- ( ) Bar chart
- ( ) Histograms

Question No: 5 Incorrect Answer

Which of the following is an assumption for linear regression?

- Predictors must be continuous
- Response is linearly dependent on the estimated parameters.
- Response must be continuous
- Error terms must not have constant variance — You Selected

Question No: 6 Correct Answer

All large cities are concerned about parking space and pollution due to the number of private vehicles. A survey found the information provided below. Which of the predictor causes the maximum change in the 'number of vehicles' (dependent variable) per unit increase?

Predictor	**Coefficients**
Intercept	100222.6
Gas Price	-689.523
Population of city	0.055
Monthly income of riders	-1.301
Average parking rates per month	152.456

Note: All the predictor (independent) variables have been scaled.

- Gas price — You Selected
- Population
- Monthly income
- Average parking rate

Question No: 7 Correct Answer

Market price (MP) of a house depends on its area (square feet) and age (years). From a sample data, the regression equation is determined as

MP = 57.35 + 0.0177 * Area – 0.666 * Age

Two houses are on the market: A (area = 1682 sq feet, 20-year-old) and B (area = 1856 sq feet, 22-year-old). Which of the following statements do you agree with?

- A is less expensive than B — You Selected
- A is more expensive than B
- A and B are of almost equal value

Question No: 8 Correct Answer

MPG (Miles per Gallon) performance of a car depends on its Horsepower. Based on 32 different cars' horsepower and MPG, the following regression equation is arrived at, where Y is MPG.

Y = 30 - 0.7 HP

If car A has HP = 15 and car B has HP = 20, then

- (●) Car A is expected to have 3.5 miles per gallon more than Car B — You Selected
- ( ) Car A is expected to have 3.5 miles per gallon less than Car B
- ( ) Car A is expected to have 0.7 miles per gallon less than Car B
- ( ) Car A is expected to have 0.7 miles per gallon more than Car B

Question No: 9 Incorrect Answer

To answer the below question, do the following:

Load the dataset ThreeCars-1.csv
Do not scale the data
Do not split the data
Make a Linear Regression model with 'Price' as the target variable

What is the value of R Squared?

Note: Please do not pre-process the data in any way before fitting the linear regression model.

- ( ) 0.78
- (●) 0.81 — You Selected
- ( ) 0.74
- ( ) 0.70

Question No: 10 Incorrect Answer

To answer the below question, do the following:

Load the dataset ThreeCars-1.csv

Do not scale the data
Do not split the data
Make a Linear Regression model with 'Price' as the target variable

What is the value of Price for these input parameters?

Variable	Value
Age	3
Mileage	43
Porsche	1
Jaguar	0
BMW	0

Note: Please do not pre-process the data in any way before fitting the linear regression model.

- 49.222
- 50.190 — You Selected
- 48.221
- 50.222

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