

Course: 0304 Fundamentals of Predictive Modelling

Assessment: Fundamentals of Predictive Modelling Concepts

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If the R squared value of a regression model with X1 as the dependent variable and other predictors as independent variables is 0.80, then the variance inflation factor for independent variable X1 is: 1 / 1

° 10

° 2.5

None of these

Correct answer

None of these

Feedback

• Yes, that is correct.

Is this statement true or false?

In a linear regression model, the higher the root mean squared error (RMSE), the better the model fit. 1/1

○ True

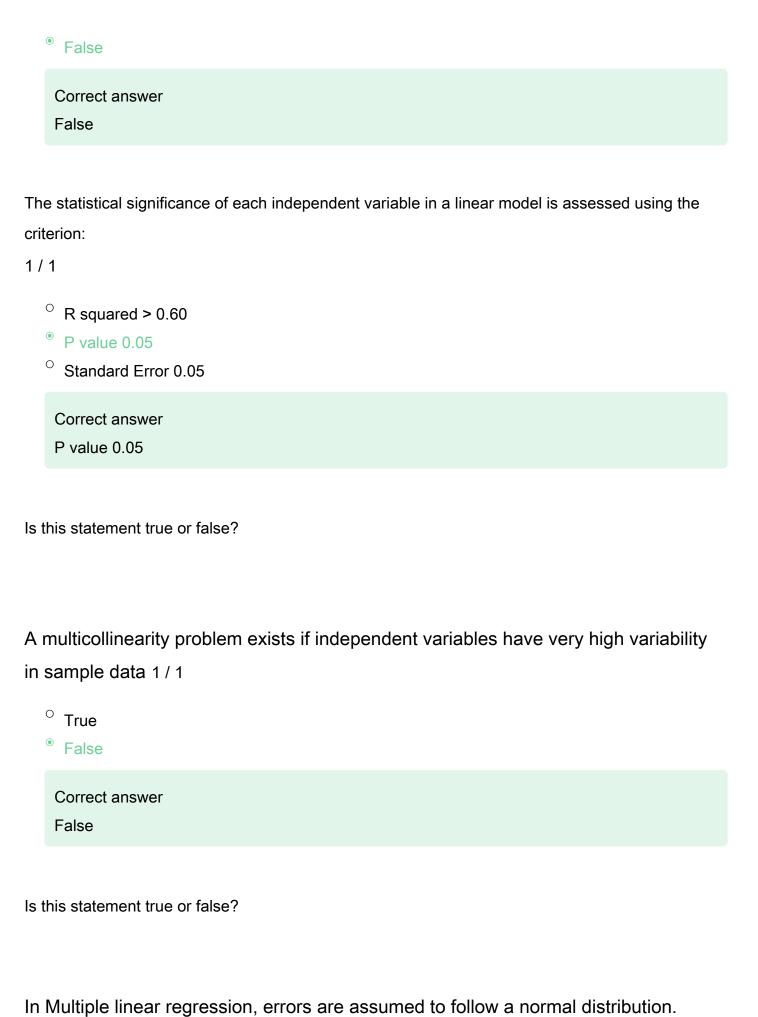
False

| | False | | |
|---|--------------------------------------|--|--|
| | Feedback | | |
| | That is correct! Well done! | | |
| ls t | his statement true or false? | | |
| In the K fold cross validation method, K is the number of parameters in a linear regression model 1 / 1 | | | |
| | TrueFalse | | |
| | Correct answer False | | |
| | Feedback | | |
| | That is correct! Well done! | | |
| Is this statement true or false? | | | |
| The regression coefficient in a multiple linear regression model can never be negative. | | | |

Correct answer

1/1

 $^{\circ}$ True



| 1 / | 1 |
|------|---|
| | True False |
| | Correct answer True |
| In a | a linear model, RMSE is: |
| | Root mean significant error Root mean squared error Root mean standard error |
| | Correct answer Root mean squared error |
| ls t | his statement true or false? |
| sig | multiple linear regression, the test statistic based on a t distribution for testing the nificance of the regression coefficient is defined as estimated coefficient divided R squared. |
| 1 / | 1 |
| | True False |

Correct answer

False

Is the statement true or false? In multiple linear regression, R squared is defined as explained variation divided by unexplained variation 1/1 $^{\circ}$ True • False Correct answer False Is this statement true or false? The residual value in linear regression is always positive 1/1 $^{\circ}$ True • False Correct answer False If errors in multiple linear regression follow a normal distribution, then it confirms that: 1/1 Errors in the model are very low Multicollinearity is absent None of these Correct answer None of these

Is this statement true or false?

| Assuming there are 10 independent variables in multiple linear regression, the R |
|---|
| squared value = 0.5 indicates exactly 5 regression coefficients are statistically |
| significant. 1 / 1 |



• False

Correct answer

False

Is this statement true or false?

The intercept term in multiple linear regression cannot be negative 1/1

 $^{\circ}$ True

• False

Correct answer

False

Is this statement true or false?

The sum of regression coefficients in multiple linear regression is always zero.

1/1

 $^{\circ}$ True

• False

Correct answer

False

Is this statement true or false?

| In the case of multiple linear regression, a negative estimated value | of the |
|--|--------|
| regression coefficient indicates an insignificant regression coefficient | t. 1/1 |

 $^{\circ}$ True

• False

Correct answer

False

Ordinary least squares are one of the methods for:

1/1

- Outlier detection
- Assessing symmetry of data
- Neither of these

Correct answer

Neither of these

Which of the following is a remedial measure for multicollinearity problems in multiple linear regression?

1/1

- Logistic Regression
- Ridge Regression
- O Poisson Regression

Correct answer

Ridge Regression

Is this statement true or false?

If the R squared value in multiple linear regression is 0.90, then the value of error sum of squares is $0.30\ 1\ /\ 1$

 $^{\circ}$ True

• False

Correct answer

False

Is this statement true or false?

The regression coefficient b represents a change in variable X, when the dependent variable Y changes by one unit

1/1

 $^{\circ}$ True

• False

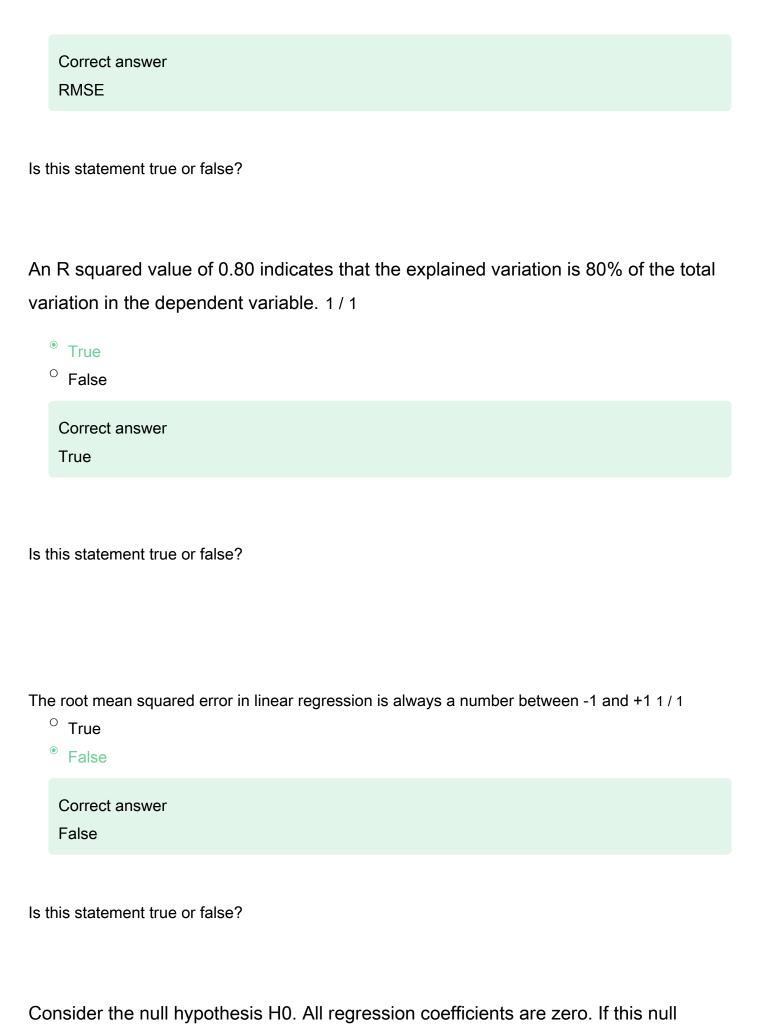
Correct answer

False

Which of the following measures is used to validate a multiple linear regression model using the holdout method?

1/1

- RMSE
- $^{\circ}\,$ VIF values
- O None of these



| hypothesis is rejected, then all regression coefficients are statistically significant. 1 / 1 |
|---|
| ○ True● False |
| Correct answer False |
| Is this statement true or false? |
| |
| If X1 is an independent variable and the square of X1 is added as one of the independent variables, then the model remains as multiple linear regression. 0 / 1 |
| ○ True● False |
| Correct answer True |
| Is the following statement true or false? |
| OLS in multiple linear regression stands for Ordinary Least Squares |
| 1/1 True False |
| Correct answer True |
| Feedback |

That is correct! Well done!

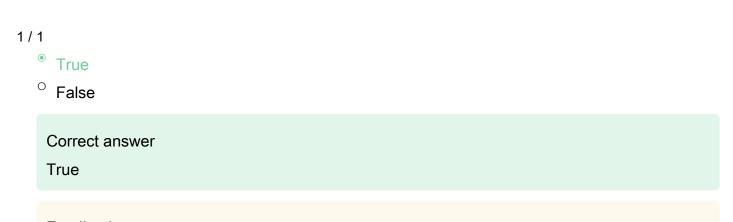
Is the following statement true or false?

1) All regression coefficients in a multiple linear regression model should have the same sign.

| 1 / | 1 |
|-----|-----------------------------|
| | ° True |
| | False |
| | Correct answer False |
| | Feedback |
| | |
| | That is correct! Well done! |

Is the following statement true or false?

A variable measured on nominal scale can be included in linear regression as an independent variable



Feedback

• That is correct! Well done!

Is the following statement true or false?

A multicollinearity problem exists if any independent variable has a very high correlation with the dependent variable.

1/1

 $^{\circ}$ True

• False

Correct answer

False

Feedback

• That is correct! Well done!