

MACHINE LEARNING

In Q1 to Q8, only one option is correct, Choose the correct option:

1. In the linear regression equation $y = \theta_0 + \theta_1 X$, θ_0 is the:
- A) Slope of the line
 - B) Independent variable
 - C) y intercept
 - D) Coefficient of determination

Answer

C) y intercept

2. True or False: Linear Regression is a supervised learning algorithm.
- A) True
 - B) False

Answer

B) True.

3. In regression analysis, the variable that is being predicted is:
- A) the independent variable
 - B) the dependent variable
 - C) usually denoted by x
 - D) usually denoted by r

Answer

B) the dependent variable.

4. Generally, which of the following method(s) is used for predicting continuous dependent variables?
- A) Logistic Regression
 - B) Linear Regression
 - C) Both
 - D) None of the above

Answer

B) Linear Regression

5. The coefficient of determination is:
- A) the square root of the correlation coefficient
 - B) usually less than zero
 - C) the correlation coefficient squared
 - D) equal to zero

Answer

6. If the slope of the regression equation is positive, then:
- A) y decreases as x increases
 - B) y increases as x increases
 - C) y decreases as x decreases
 - D) None of these

7. Linear Regression works best for:
- A) linear data
 - B) non-linear data
 - C) both linear and non-linear data
 - D) None of the above

8. The coefficient of determination can be in the range of:
- A) 0 to 1
 - B) -1 to 1
 - C) -1 to 0
 - D) 0 to infinity

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In Q9 to Q13, more than one options are correct, Choose all the correct options:

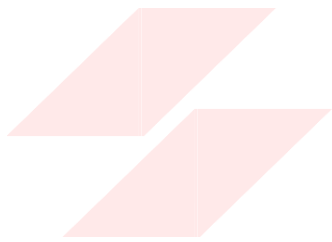
- Which of the following evaluation metrics can be used for linear regression?
 - Classification Report
 - RMSE
 - ROC curve
 - MAE
- Which of the following is true for linear regression?
 - Linear regression is a supervised learning algorithm.
 - Linear regression supports multi-collinearity.
 - Shape of linear regression's cost function is convex.
 - Linear regression is used to predict discrete dependent variable.
- Which of the following regularizations can be applied to linear regression?
 - Ridge
 - Lasso
 - Pruning
 - Elastic Net
- Linear regression performs better for:
 - Large amount of training samples with small number of features.
 - Same number of features and training samples
 - Large number of features
 - The variables which are drawn independently, identically distributed
- Which of the following assumptions are true for linear regression?
 - Linearity
 - Homoscedasticity
 - Non-Independent
 - Normality

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Q14 and Q15 are subjective answer type questions, Answer them briefly.

14. Explain Linear Regression?

15. What is difference between simple linear and multiple linear regression?



FLIP ROBO
