

# MACHINE LEARNING

1. Which of the following methods do we use to find the best fit line for data in Linear Regression?

Answer : A) Least Square Error

2. Which of the following statement is true about outliers in linear regression?

Answer : A) Linear regression is sensitive to outliers

3. A line falls from left to right if a slope is \_\_\_\_\_?

Answer : B) Negative

4. Which of the following will have symmetric relation between dependent variable and independent variable?

Answer : B) Correlation

5. Which of the following is the reason for over fitting condition?

Answer : C) Low bias and high variance

6. If output involves label then that model is called as:

Answer : B) Predictive modal

7. Lasso and Ridge regression techniques belong to \_\_\_\_\_?

Answer :D) Regularization

8. To overcome with imbalance dataset which technique can be used?

Answer :D) SMOTE

9. The AUC Receiver Operator Characteristic (AUCROC) curve is an evaluation metric for binary classification problems. It uses \_\_\_\_\_ to make graph?

Answer : C) Sensitivity and Specificity

10. In AUC Receiver Operator Characteristic (AUCROC) curve for the better model area under the curve should be less.

Answer : B) False

11. Pick the feature extraction from below:

Answer :B) Apply PCA to project high dimensional data

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12. Which of the following is true about Normal Equation used to compute the coefficient of the Linear Regression?

Answer : A) We don't have to choose the learning rate.

B) It becomes slow when number of features is very large.

ASSIGNMENT – 39 MACHINE LEARNING Q13 and Q15 are subjective answer type questions,

Answer them briefly.

13. Explain the term regularization?

Answer : Regularization is a technique to prevent the model from overfitting by adding to extra information to it.

14. Which particular algorithms are used for regularization?

Answer : Lasso and Ridge Regression are regularization techniques used to prevent overfitting in Linear Regression model by adding a penalty term to the loss function.

15. Explain the term error present in linear regression equation?

Answer :  $a + bx + \text{error}$

Here in this linear equation

residual error (MSE) =  $\sum (\text{Actual output} - \text{Predicted output})^2 / \text{Actual Output}$

It is created when the model does not fully represent the actual relationship between the independent variable and the dependent variables.