

MACHINE LEARNING

In Q1 to Q11, only one option is correct, choose the correct option:

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 outlier)

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(Regression)

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

Answer-A(High 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 problem. It uses_____ to make graph?

Answer-A(TPR and FPR)

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

Answer-B(True)

11. Pick the feature extraction from below:

Answer-B(Apply PCA to project high dimensional data)

In Q12, more than one options are correct, choose all the correct options:

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

Answer-B,C(it becomes slow when number of feature is very large,we need to iterate)

Q13 and Q15 are subjective answer type questions, Answer them briefly

Q13-Explain the term regularization?

Answer- We use regularization for overfitting .To fix overfitting in our machine learning models. There are 3 types of regularization techniques:-

- 1). LASSO regression.
- 2). Ridge regression.
- 3). Elastic net.

Q14-which particular algorithms are used for regularization?

Answer- There are 3 types of algorithms which is used for regularization.

- 1). Lasso regression:- least Absolute Shrinkage Selection Operator. This method is used for more accurate prediction.
- 2). Ridge regression:- this method is use for the analysis of the data which is suffering from multicollinearity.
- 3). Elastic net:- this method is the combination of lasso and ridge regression.

Q15-Explain the term error present in linear regression equation?

Answer:- A regression equation is the formula of a straight line in this case the best fit line through a scatter plot of data if there were no error all the data point would be located on the regression line to the extent they are not present error this is what the error term summaries.