

MACHINE LEARNING

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

Ans. A) Least Square Error

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

Ans. A) Linear regression is sensitive to outliers

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

Ans. B) Negative

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

Ans. B) Correlation

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

Ans. C) Low bias and high variance

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

Ans. B) Predictive model

7. Lasso and Ridge regression techniques belong to _____?

Ans. D) Regularization

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

Ans. D) SMOTE

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

Ans. A) TPR and FPR

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

Ans. B) False

11. Pick the feature extraction from below:

Ans. B) Apply PCA to project high dimensional data

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

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

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

13. Explain the term regularization?

Ans. Regularization is one of the important concepts of machine learning. It's a technique to prevent model from overfitting by adding extra information to it.

Sometimes, the machine learning model performs well in training data however in test data it doesn't which means model is not able to predict the output while dealing with the test data. Thus the model is called overfitted. This problem can be resolved with the help of regularization technique.

This is a form of regression, that constrains/ regularizes or shrinks the coefficient estimates towards zero. In other words, this technique discourages learning a more complex or flexible model, so as to avoid the risk of overfitting.

14. Which particular algorithms are used for regularization?

Ans. Ridge Regression – Ridge regression is a model tuning method that is used to analyse any data that suffers from multicollinearity.

Lasso Regression – “LASSO” stands for **L**east **A**bsolute **S**hrinkage and **S**election **O**perator.

Lasso regression is a type of linear regression that uses shrinkage. This type of regression is well-suited for models showing high levels of multi-collinearity or when we need to automate certain parts of model selection, like variable selection/parameter elimination.

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

Ans. Error is the difference between the actual value and Predicted value and the goal is to reduce this difference which in turn summarizes the predictive skill of a model.