Machine Learning

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

Ans:- D) Both A and B(Least Square Error, Maximum Likelihood)

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(Synthetic minority over sampling technique)

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(true positive rate and false positive rate)

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:- A) Construction bag of words from an Email

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

Ans:-

13. Explain the term regularization?

Ans:- Regularization is a Method/technique, which we used in machine learning and statistical modeling to reduce the overfitting and improve the generalization of models. Typically, regularization trades a marginal decrease in training accuracy for an increase. Regularization is commonly used in Overfitting Prevention and Improving mode generalization.

Types

- L1 Regularization(Lasso)
- L2 Regularization (Ridge)
- Elastic Net Regularization

14. Which particular algorithms are used for regularization?

Ans:- Regularization techniques are not algorithms themselves but rather methods applied to algorithms to prevent overfitting and improve the generalization of models. Here are some popular machine learning algorithms that incorporate regularization techniques.

1. Linear Regression with Regularization

> **Ridge Regression (L2 Regularization)**

> Lasso Regression (L1 Regularization)

> Elastic Net

2. Logistic Regression with Regularization

3. Support Vector Machines (SVMs)

4. Neural Networks

5. Decision Trees

6. Generalized Linear Models (GLMs)

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