MACHINE LEARNING ASSIGNMENT ….

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

ANS - (A) Least Square Method..

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 – (C) Both of them

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

ANS – (A) High bias and high variance

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

ANS – (C) Reinforcement learning

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 – (C) Sensitivity and Specificity

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 - Regularizations are techniques used to reduce the error by fitting a function appropriately on the given training set and avoid overfitting..

Sometimes the machine learning model performs well with the training data but does not perform well with the test data. It means the model is not able to predict the output when deals with unseen data by introducing noise in the output, and hence the model is called overfitted. This problem can be deal with the help of a regularization technique.

14. Which particular algorithms are used for regularization?

ANS - Mainly, there are two types of regularization techniques, which are given below:

1. Ridge Regression
2. Lasso Regression

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

ANS – The term error in linear regression is the residual error which we come across while drawing the best fit line between two variables ..

The difference between the predicted value and the actual value is called as error denoted as e in the equation given below:-

Y=a+bx+e, where y =dependent variable

X=independent variable

a= the intercept

b=the slope