**Machine Learning\_assignment**

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** D) none of these

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** 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) False

11. Pick the feature extraction from below:

**Answer** 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?

**Answers** A) We don’t have to choose the learning rate. B) It becomes slow when number of features is very large. D) It does not make use of dependent variable.

13. Explain the term regularization?

**Answer:** Regularization techniques are crucial in minimizing overfitting of data and ensuring the model performs optimally. It reduces the model’s complexity to make it more generalizable to new data, thus improving its performance on unseen datasets. It adds a penalty term to the standard loss function that a machine learning model minimizes during training. With the help of Regularization technique we can maintain balance between bias and variance.

14. Which particular algorithms are used for regularization?

**Answer**: Most commonly used regularization algorithms are Lasso Regularization (L1 Norm) , Ridge Regularization (L2 Norm) and Elastic Net Regularization.

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

**Answer:** The term error present in linear regression equation represents the differences between actual and predicted value, and our objective is to minimize these errors to create an accurate model.