MACHINE LEARNING

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

2. Which of the following statement is true about outliers in linear regression?
a) Linear regression is sensitive to outliers

3. A line falls from left to right if a slope is _____?
b) Negative (raise from left to right is positive. Line parallel to x-axis is zero. Line parallel to y-axis is undefined)

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

5. Which of the following is the reason for over fitting condition?
c) Low bias and high variance

6. If output involves label then that model is called as:
c) Reinforcement learning

7. Lasso and Ridge regression techniques belong to _____?
d) Regularization – they both attempt to minimize the sum of squared

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

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

11. Pick the feature extraction from below:
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?
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.

ASSIGNMENT – 39 MACHINE LEARNING

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

13. Explain the term regularization?

Answer: Regularization refers to techniques that are used to calibrate machine learning models in order to minimize the adjusted loss function (Regularization = Loss + Penalty) and prevent overfitting and under fitting. Using Regularization we can fit our ML model appropriately on a given test set and hence reduce the error in it. Regularization has 2 main categories – Lasso and Ridge

14. Which particular algorithms are used for regularization?

Answer: Lasso and Ridge

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

Answer: mean-squared-error which is nothing but the square of difference between estimated values and actual value