Machine Learning

Assignment

In Q1 to Q11, only one option is correct, choose the correct option:

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

Ans: A) Least Squared 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: A) Regression

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 modal

7. Lasso and Ridge regression techniques belong to _____?

Ans: A) Cross validation

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

Ans: A) Cross validation

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) applying 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?

Ans: A),B) and D)

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

13. Explain the term regularization?

Ans: Regularization is one of the most important concepts of machine learning. It is a technique to prevent the model from overfitting by adding extra information to it. This technique can be used in such a way that it will allow to maintain all variables or features in the model by reducing the magnitude of the variables. Hence, it maintains accuracy as well as a generalization of the model.

14. Which particular algorithms are used for regularization?

Ans: Lasso Regularization – L1 Regularization algorithms are used for regularization.

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

Ans: The error term in a regression equation represents the effect of the variables that were omitted from the equation.