

MACHINE LEARNING

ASSIGNMENT – 39

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?

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

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

A) Regression

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:

B) Predictive modal

7. Lasso and Ridge regression techniques belong to _____?

D) Regularization

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

10. In AUC Receiver Operator Characteristic (AUCROC) curve for the better model area under the

curve should be less.

B) False

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.

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

13. Explain the term regularization?

Regularization is a technique to prevent model from overfitting by adding extra information to it. Sometimes the machine learning model performs well with training data but does not perform well with test data.

14. Which particular algorithms are used for regularization?

L1-Lasso Regularization - It modifies the over-fitted or under-fitted models by adding the penalty equivalent to the sum of the absolute values of coefficients.

and L2- Ridge Regularization- it modifies the over-fitted or under-fitted models by adding the penalty equivalent to the sum of the squares of the magnitude of coefficients.

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

Regression models are evaluated based on their ability to minimize the error between the predicted and actual values of the target variable.

Common error metrics include mean absolute error (MAE), mean squared error (MSE), and root mean squared error (RMSE)