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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?

   C) Both of them

5. Which of the following is the reason for over fitting condition?
   A) High bias and high variance
   B) Low bias and low variance
   C) Low bias and high variance
   D) none of these

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?

   B) Regularization

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.

    A) True

11. Pick the feature extraction from below:

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A) Construction bag of words from a email

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.
C) We need to iterate.

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

13. Explain the term regularization?

Sometimes while training a model, overfitting and underfitting of data occur. This leads to the inaccuracy of the trained model. Regularization is the technique used to reduce the error by fitting a function appropriately on the given training set and avoid overfitting and underfitting

14. Which particular algorithms are used for regularization?

LASSO, Ridge, and Elastic-Net regression.

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

The error term of a regression equation represents all of the variation in the dependent variable *not* explained by the weighted independent variables.