

# Machine learning

---

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

(D) Both A and B

Q 2 Which of the following statement is true about outliers in linear regression?

(A) Linear regression is sensitive to outliers

Q 3 A line falls from left to right if a slope is \_\_\_\_\_?

B) Negative

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

A) Regression

Q 5 Which of the following is the reason for over fitting condition?

C) Low bias and high variance

Q 6 If output involves label then that model is called as:

B) Predictive modal

Q 7 Lasso and Ridge regression techniques belong to \_\_\_\_\_?

D) Regularization

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

D) SMOTE

Q 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

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

A) True

Q 12 Which of the following is true about Normal Equation used to compute the coefficient of the Linear Regression?

B) It becomes slow when number of features is very large.

D) It does not make use of dependent variable.

Q 13 Explain the term regularization?

Regularization is a set of methods for reducing overfitting in machine learning models. Typically, regularization trades a marginal decrease in training accuracy for an increase in generalizability.

Regularization encompasses a range of techniques to correct for overfitting in machine learning models. As such, regularization is a method for increasing a model's generalizability—that is, it's ability to produce accurate predictions on new datasets. Regularization provides this increased generalizability at the sake of increased training error. In other words, regularization methods typically lead to less accurate predictions on training data but more accurate predictions on test data.

Regularization differs from optimization. Essentially, the former increases model generalizability while the latter increases model training accuracy. Both are important concepts in machine learning and data science.

There are many forms of regularization. Anything in the way of a complete guide requires a much longer book-length treatment. Nevertheless, this article provides an overview of the theory necessary to understand regularization's purpose in machine learning as well as a survey of several popular regularization techniques.

Q 14 Explain the term error present in linear regression equation?

Linear regression is a form of analysis that relates to current trends experienced by a particular security or index by providing a relationship between a dependent and independent variables, such as the price of a security and the passage of time, resulting in a trend line that can be used as predicted model. A linear regression exhibits less delay than that experienced was moving average as the line is fit to the data points instead of based on the averages within the data. This allows the line to change more quickly and dramatically than a line based on numerical averaging of the available data points.

---

