

MACHINE LEARNING ANSWERS

1. A) Least Square Error
2. A) Linear regression is sensitive to outliers
3. B) Negative
4. B) Correlation
5. C) Low bias and high variance
6. B) Predictive model
7. D) Regularization
8. D) SMOTE
9. A) TPR and FPR
10. B) False
11. B) Apply PCA to project high dimensional data
12. A) We don't have to choose the learning rate AND B) It becomes slow when number of features is very large.
13. Regularization refers to techniques that are used to calibrate machine learning models in order to minimize the adjusted loss function and prevent overfitting or underfitting. There are two main types of regularization techniques: Ridge Regularization and Lasso Regularization. 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. Lasso Regularization modifies the over-fitted or under-fitted models by adding the penalty equivalent to the sum of the absolute values of coefficients.
14. Ridge Regularization and Lasso Regularization
15. An error term is a residual variable produced by a statistical or mathematical model, which is created when the model does not fully represent the actual relationship between the independent variables and the dependent variables. As a result of this incomplete relationship, the error term is the amount at which the equation may differ during empirical analysis. A Linear Regression model's main aim is to find the best fit linear line and the optimal values of intercept and coefficients such that the error is minimized. Error is the difference between the actual value and Predicted value.