

# Machine Learning

1. Least Square Error
2. Linear Regression is not sensitive to outliers
3. Negative
4. Regression
5. Low Bias and High Variance
6. Predictive model
7. Regularization
8. SMOTE (Synthetic Minority Oversampling Technique)
9. TPR and FPR
10. False
11. Construction Bag of words from an email.
12. B) It becomes slow when number of features is very large  
C) We need to iterate
13. Regularization used to reduce the errors by fitting the function on the given training dataset and avoiding overfitting issue. During the regularization the output does not change the change is only the loss of function. Machine learning model perform well with the training data but not perform with test data which means the model is unable to predict the output which deals with unknown data by introducing noise in the output which prevent overfitting in the dataset to overcome with this issue we used Regularization. It allows to maintain all feature in the model by reducing the magnitude of the variable. It maintains accuracy and generalization
14. Algorithm used for Regularization
  - A) Ridge Regression (L2 Regularization)
  - B) Lasso Regression (L1 Regularization)
  - C) Drop Out

15. An Error term is a residual variable produced by a statistical or mathematical model which is created when the model is not fully represent the actual relationship between the independent variable and the dependent variable. In term of linear regression equations it appears in a statistical model to indicate the uncertainty in the model. The error term is residual variable that accounts for a lack of perfect goodness of it

Linear regression model tracking a Stock's price over time, the error term is the difference between the expected price at a particular time and the price that was actually observed. The price is exactly what was anticipated at a particular time, The price will fall on the trend line and the error term will be zero