In [1]:
```
#MACHINE LEARNING
```

1. Which of the following methods do we use to find the best fit line for data in Linear Regression? A) Least Square Error B) Maximum Likelihood C) Logarithmic Loss D) Both A and B

D) Both A and B (Least Square Error and Maximum Likelihood)

1. Which of the following statement is true about outliers in linear regression? A) Linear regression is sensitive to outliers B) linear regression is not sensitive to outliers C) Can't say D) none of thes

A) Linear regression is sensitive to outliers

1. A line falls from left to right if a slope is __? A) Positive B) Negative C) Zero D) Undefined

B) Negative

1. Which of the following will have symmetric relation between dependent variable and independent variable? A) Regression B) Correlation C) Both of them D) None of these

B) Correlation

1. 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

C) Low bias and high variance

1. If output involves label then that model is called as: A) Descriptive model B) Predictive modal C) Reinforcement learning D) All of the above

B) Predictive model

1. Lasso and Ridge regression techniques belong to _? A) Cross validation B) Removing outliers C) SMOTE D) Regularization

D) Regularization

1. To overcome with imbalance dataset which technique can be used? A) Cross validation B) Regularization C) Kernel D) SMOTE

D) SMOTE

1. The AUC Receiver Operator Characteristic (AUCROC) curve is an evaluation metric for binary classification problems. It uses _ to make graph? A) TPR and FPR B) Sensitivity and precision C) Sensitivity and Specificity D) Recall and precision

A) TPR and FPR (True Positive Rate and False Positive Rate)

1. In AUC Receiver Operator Characteristic (AUCROC) curve for the better model area under the curve should be less. A) True B) False

B) False

1. Pick the feature extraction from below: A) Construction bag of words from a email B) Apply PCA to project high dimensional data C) Removing stop words D) Forward selection

A) Constructing a bag of words from an email B) Applying PCA to project high-dimensional data C) Removing stop words

1. 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. D) It does not make use of dependent variable.

B) It becomes slow when the number of features is very large. C) We need to iterate.

1. Explain the term regularization:

Regularization is like a guide for machine learning models. It helps them not to get too carried away with the training data, preventing overthinking and making sure the model is more generalizable to new, unseen data.

1. Which particular algorithms are used for regularization:

There are two popular regularization techniques called Lasso (L1 regularization) and Ridge (L2 regularization). They work like supervisors for our model, guiding it to learn in a way that avoids being too influenced by any single feature.

1. Explain the term error present in linear regression equation:

In linear regression, we're trying to draw a line that best fits our data. But, guess what? It's rare that we get a perfect fit. The error in the equation is like the gap between our predicted values and the actual values. We're essentially saying, "Okay, our line is close, but there's a little room for improvement." So, we use this error to make our line even better.

In [ ]: