MACHINE LEARNING

1 = A) least square error

2 = A) Linear regression is sensitive to outliers

3 = A) Positive

4 = B) Correlation

5 = C) Low bias and high variance

6 = B) Predictive modal

7 = D) Regularization

8 = D) SMOTE

9 = A) TPR and FPR

10 =B) False

11 = B) Apply PCA to project high dimensional data

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

A) We don't have to choose the learning rate.

SUBJECTIVE

13 = Regularization is a set of method for reducing overfitting in machine learning models. regularization is increasing a model's generalizability that is it's ability to produce accurate prediction on new datasets. The regularization term or penalty imposes a cost on the optimization function to make the optimal solution unique. Regularization is differs from optimization. There are two types of regularization 1) L1 regularization 2) L2 regularization.

14 = lasso regression on AKA L1 regularization

Ridge regression AKA L2 regularization

Elastic net (L1+L2) regularization

Ensembling

Neural network dropout

Pruning decision tree-based model

Data augmentation.

15 = An error term represents the margin of error within a statistical model. It refers to the sum of the deviations within the regression line which provides an explanation for the difference between the theoretical value of the model. The error term is a random variable with a mean of zero and a constant variance. These could be variables that weren't measured variable that were excluded due to multicollinearity.