MACHINE LEARNING

Answer 1 to 11 :-

Answer 1 = (A) Least square error

Answer 2 = (A) Linear regression is sensitive to outliers

Answer 3 = (B) Negative

Answer 4 = (B) Correlation

Answer 5 = (C) Low bias and high variance

Answer 6 = (B) Predictive model

Answer 7 = (D) Regularization

Answer 8 = (D) SMOTE

Answer 9 = (C)Sensitivity and specificity

Answer 10 = (B) False

Answer 11 = (B) Apply PCA to project high dimentional data

Answer 12 = (A) and (B)

ANSWER 13 TO 15 :-

Answer 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 . we can also fit our machine learning model appropriately on a given test set and hence reduce the errors in it.

Answer 14 = There are 3 main algorithms used for regularization:-

1: Lasso: Lasso is a regression analysis method which performs both selection and regularization features to enhance the prediction accuracy of the model. It also adds a penalty (L1 penalty) to the loss function which is equivalent to the magnitude of the coefficient.

2: Ridge regression: This method helps in analyzing data that suffers from multi-collinearity . It also adds a penalty (L2 penalty) to the loss function which is equivalent to the square of the magnitude of the coefficient.

3: Elastic-net regression: This method can linearly combines the (L1 and L2) penalties of the ridge and lasso methods respectively.

Answer 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 and dependent variable . as a result of this incomplete relationship , the error term is the amount at which the equation may differ during empirical analysis .