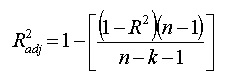
**MACHINE LEARNING**

1. C
2. C
3. C
4. B
5. A
6. A,D
7. B,C
8. A,C
9. A

R-squared (R2) is a statistical measure that represents the proportion of the variance for a dependent variable that's explained by an independent variable or variables in a regression model. The Formula for R-Squared Is ​

R2 =1− [ Unexplained Variation / Total Variation].

R-Squared only works as intended in a simple linear regression model with one explanatory variable. With a multiple regression made up of several independent variables, the R-Squared must be adjusted. The adjusted R-squared compares the descriptive power of regression models that include diverse numbers of predictors. Every predictor added to a model increases R-squared and never decreases it. Thus, a model with more terms may seem to have a better fit just for the fact that it has more terms, while the adjusted R-squared compensates for the addition of variables and only increases if the new term enhances the model above what would be obtained by probability and decreases when a predictor enhances the model less than what is predicted by chance. The formula for Adjusted R-Squared is

​ 



The difference between ridge and lasso regression is that it tends to make coefficients to absolute zero as compared to Ridge which never sets the value of coefficient to absolute zero.



Scaling is one of the important pre-processing that is required for standardizing/normalization of the input data. When the range of values are very distinct in each column, we need to scale them to the common level. The values are brought to common level and then we can apply further machine learning algorithm to the input data. One way to scale the values is to bring the values of all the column between 0 to 1 or we can bring them to common level having values between -3 to 3.



The metrics that we can use to check the goodness of fit for linear regressions are as follow:

Mean Absolute Error and Mean Square Error

Root Mean Squared Error

Relative Absolute Error and Relative Squared Error

R^2 and Adjusted R^2



SENITIVITY OR RECALL : 0.8

SPECIFICITY: 0.6

ACCURACY: 0.88