



In Q1 to Q11, only one option is correct, choose the correct option:

- 1) A) Least Square Error
- 2) A) Linear regression is sensitive to outliers
- 3) B) Negative
- 4) C) Both of them
- 5) C) Low bias and high variance
- 6) B) Predictive model
- 7) D) Regularization
- 8) D) SMOTE
- 9) A) TPR and FPR
- 10) B) False
- 11) A) Construction bag of words from a email

In Q12, more than one options are correct, choose all the correct options:

- 12) C) We need to iterate.

Q13 and Q15 are subjective answer type questions, Answer them briefly.

13. Explain the term regularization?

- 1) It is a to techniques that are used to **calibrate** machine learning models
- 2) It is a technique to prevent the model from overfitting by adding extra information to it.
- 3) It is a technique that used to fix overfitting problem

Example

Let's suppose we have built the model and the learning rate of the model is too fast, So with the fast learning rate we can not reach the global minima (the position where the error is too less or negligible). Hence Regularization techniques tell the model to learn slowly, but how much slowly does the model learn ? so lasso and Ridge comes in picture that will tell us the best learning rate

14. Which particular algorithms are used for regularization?

15. Explain the term error present in linear regression equation?

- 1) Residuals
- 2) Mean absolute error
- 3) Mean Square error
- 4) Root Mean Square Error
- 5) R-squared _How Well Does the Model Fit the data? / model confidence