Machine Learning

1. A. Least Square Error.

2. B. Linear regression is sensitive to outliers.

3. B. Negative.

4. c. Both.

5. A. High bias and high variance.

6. B. Predictive modelling.

7. D. Regularisation.

8. A. Cross validation.

9. A. TPR and FPR

10. B. False.

11. D. all the above.

12. A. We don’t have to choose the learning rate.

13. Regularization is a technique used to avoid overfitting by penalising high valued regression coefficients. It reduces the parameters and shrinks the model. There are few regularisation techniques used when train data error decreases but test data error increases.

14. The algorithms that are used for regularisation are

A. Ridge Regression: Ridge regression is a L2 norm where we add the sum of weights square (normalised weights) to a loss function to minimise the parameters thus decreasing the overfitting.

B. Lasso Regression: Unlike the ridge regression, lasso regression uses the absolute weight values for normalisation. Thus optimises by penalising higher weight values.

C. Dropout: it is a regularisation technique used in neural networks. using dropout you can drop connections with keep probability parameter for each of specified layers.

15. In linear regression equation, Error or residual is the vertical distance between the actual value of y to the estimated value of y on the regression line. If the observed data point is above the line, residual is positive and if it lies below the line residual is negative.