

MACHINE LEARNING

1 – [A]

2 – [A]

3 – [B]

4 – [C]

5 – [C]

6 – [B]

7 – [D]

8 – [A]

9 – [A]

10 – [B]

11 – [B]

12 – [A], [B], [C]

13. Explain the term Regularization?

Answer – Regularization is a way to avoid overfitting by penalizing high-valued regression coefficients. In simple terms, this technique discourages learning a more complex or flexible model, so as to avoid the risk of overfitting.

14. Which particular algorithms are used for regularization?

Answer – The different type of regularization algorithms is: -

- Ridge Regression
- LASSO (Least Absolute Shrinkage and Selection Operator) Regression
- Elastic – Net Regression

Ridge Regression: - Ridge regression shrinks the coefficients as it helps to reduce the model complexity and multi-collinearity. It also known as the L2 Regularization.

LASSO: - LASSO regression converts coefficients of less important features to zero, which indeed helps in feature selection, and it shrinks the coefficients of remaining features to reduce the model complexity, hence avoiding overfitting. It is also known as L1 Regularization (L1 penalty).

Elastic - Net Regression: - Elastic – Net is a regularized regression method that linearly combines the L1 and L2 penalties of the LASSO and Ridge methods respectively.

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

Answer – An error term represents the margin of error within a statistical model, it refers to the sum of the deviation with the regression line, which provides an explanation for the difference between the theoretical value of the model and the actual observed results.

