

MACHINE LEARNING

1.d.Both a and b

2.a

3.b

4.b

5.c

6.b

7.d

8.d

9.a

10.b

11. a and b

12. a,b and d

13.when we use regression models to train some data, there is a good chance that the model will over fit the given training data set. Regularization helps sort this overfitting problem by restricting the degrees of freedom of a given equation i.e simply reducing the no. of degrees of a polynomial function reducing their corresponding weights.

In a linear equation, we don't want huge weights/co-efficients as a small change in weight can make a large difference for the dependent variable(y). so, regularization constraints the weights of such features to avoid overfitting.

To regularize the model a shrinkage penalty is added to the cost function. Let's see different types of regularizations in regression:

- LASSO - also known as L1 form.
- RIDGE - also known as L2 form
- ELASTINET - less popular, also known as a combination of L1 & L2 form

14. The algorithms used for regularization are:

- LASSO - also known as L1 form.
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15. An error term represents the margin of error within a statistical model; it refers to the sum of the deviations within the regression line, which provides an explanation for the difference between the theoretical value of the model and the actual observed results.