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M.Tech: Data Science

R-square value tells you how much variation is explained by your model. So 0.1 R-square means that your model explains 10% of variation within the data. The greater R-square the better the model.

1st Feature

The R2 score for Polynomial Linear Regression with <u>order 2</u> is 0.1395 which signifies approximately 13 – 14 % variations within the data. i.e. 86 -87 % of the variation is unexplained. Hence, we could not predict result confidently using polynomial Linear Regression with order of 2.

The R2 score for Polynomial Linear Regression with <u>order 3</u> is 0.1620 which signifies approximately 16 % variations within the data. i.e. 84 % of the variation is unexplained. Hence, we could not predict result confidently using polynomial Linear Regression with order of 3.

After the 3rd order as we increase the order of our model the R2 score value gets decreased, which signifies that error would reduce till 3rd order and it will start to increase after 3rd order.

2nd Feature

The R2 score for Polynomial Linear Regression with <u>order 2</u> is 0.7631 which signifies approximately 76 % variations within the data. i.e. 24 % of the variation is unexplained. Hence, we could predict result with moderate confidence using polynomial Linear Regression with order of 2.

The R2 score for Polynomial Linear Regression with <u>order 3</u> is 0.7728 which signifies approximately 77 % variations within the data. i.e. 23 % of the variation is unexplained. Hence, we could predict result with moderate confidence using polynomial Linear Regression with order of 3.

After the 3rd order as we increase the order of our model the R2 score value gets decreased, which signifies that error would reduce till 3rd order and it will start to increase after 3rd order.