Train In Data

Regression Metrics

Overview

MSE, RMSE and MAE

MSE, RMSE, MAE is inversely proportional to model performance. We want to minimize the value of MSE, RMSE, MAE because closer the value to 0 greater is the performance of the model, since the loss is minimum near zero.
MSE, RMSE, MAE: are the measure of the distance between the true label and predicted label, lower the distance (value) better the model.

$$\mathrm{MSE}(y, \hat{y}) = \frac{1}{n_{\text{samples}}} \sum_{i=0}^{n_{\text{samples}}-1} (y_i - \hat{y}_i)^2.$$

RMSE= $\sqrt{MSE}$

$$\mathrm{MAE}(y, \hat{y}) = \frac{1}{n_{\text{samples}}} \sum_{i=0}^{n_{\text{samples}}-1} |y_i - \hat{y}_i|.$$

R-squared

R2 score is directly proportional to model performance. We want to increase the value of r2 since closer the value to 1 greater is the model.
R2 score: is the measure of variability of the dataset.
If r2 score of the model is 0.4 it means that the model explains 40% of the variability present in the dataset and the rest it cannot.
And if r2 score is 1 that means the model is a perfect model because it explains 100% of the variability present in the dataset.

Sum of Squares

$$R^2(y, \hat{y}) = 1 - \frac{\sum_{i=1}^{n}(y_i - \hat{y}_i)^2}{\sum_{i=1}^{n}(y_i - \bar{y})^2}$$

Variance

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THANK YOU

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