Evaluation Metrics for Regression Problems

$$Error = Y_{true} - Y_{pred}$$

$$Abs.\ error = abs.(Y_{true} - Y_{pred.})$$

$$Mean.\ Abs.\ Error\ (MAE) = \frac{\sum_{i=1}^{N} abs.(Y_t - Y_p)}{N}$$

$$Squarred\ error = (True\ Value - Predicted\ Value)^2$$

$$Mean\ Squarred\ Error\ (MSE) = \frac{\sum_{i=1}^{N}(Y_T - Y_p)^2}{N}$$

$$RMSE = SQRT(MSE)$$

$$Squarred\ Log\ Error\ (SLE) = \{(1+Y_t) - (1+Y_p)\}^2$$

$$RMSLE = \left(\frac{\sum_{i=1}^{N}\{(1+Y_t) - (1+Y_p)\}^2}{N}\right)^{1/2}$$

$$Percentage\ Error = \frac{Y_T - Y_p}{Y_T} \times 100$$

$$Absolute\ Percentage\ Error = abs\left(\frac{Y_T - Y_p}{Y_T} * 100\right)$$

$$MAPE = Mean(APE)$$

$$R^2 = 1 - \frac{\sum_{i=1}^{N}(Y_T - Y_p)^2}{\sum_{i=1}^{N}(Y_T - Y_{T\,mean})}$$

$\downarrow$ coefficient of determination

R-squared (R^2) score tells how good our model fits the data.
If it is closer to 1, it means our model fits the data quite well
If it is closer to 0, it means our model isn't that good.