**Linear Regression Evaluation Metrics**

Here's a brief explanation of what each of the mentioned evaluation scores means:

1. Mean Squared Error (MSE):

- MSE represents the average of the squared differences between the predicted and actual values.

- It measures the average squared deviation of the predicted values from the true values.

- Higher values of MSE indicate larger prediction errors.

- MSE is commonly used and provides a measure of the overall model performance.

2. Mean Absolute Error (MAE):

- MAE represents the average absolute difference between the predicted and actual values.

- It measures the average magnitude of the prediction errors without considering their direction.

- MAE is easier to interpret than MSE since it is in the same unit as the target variable.

- Like MSE, higher values of MAE indicate larger prediction errors.

3. Root Mean Squared Error (RMSE):

- RMSE is the square root of MSE and represents the average magnitude of the prediction errors in the original unit of the target variable.

- It provides a measure of the standard deviation of the prediction errors.

- RMSE is often preferred when the scale of the target variable is important and you want to penalize larger errors more significantly.

- Like MSE, lower values of RMSE indicate better model performance.

4. R-squared (R²) or Coefficient of Determination:

- R-squared measures the proportion of the variance in the target variable that can be explained by the model.

- It ranges from 0 to 1, where 0 indicates that the model does not explain any variance and 1 indicates a perfect fit.

- R-squared is a relative measure and should be interpreted in comparison to other models or a baseline.

- Higher values of R-squared indicate a better fit of the model to the data.

Remember that no single evaluation metric can fully capture the performance of a model. It's important to consider multiple metrics and assess them in conjunction with the specific context and requirements of your problem.