

Performance Metrics Comparison Report

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Performance metrics are quantitative measures used to evaluate how well a model performs. Key metrics for regression tasks (such as predicting nutritional needs) include:

- **Mean Absolute Error (MAE):** Measures the average magnitude of errors in predictions, providing a straightforward indication of prediction accuracy.
- **Mean Squared Error (MSE):** Calculates the average squared difference between actual and predicted values, giving more weight to larger errors.
- **R² Score (Coefficient of Determination):** Indicates the proportion of variance in the target variable that is explained by the model, reflecting its explanatory power.
- **Root Mean Squared Error (RMSE):** The square root of MSE, providing error measurement in the same units as the target variable, making it easier to interpret.
- **Cross-Validation Score:** Assesses the model's performance across multiple folds of the data, ensuring that the evaluation is robust and not biased by any particular subset of data.