

Metric	Formula	Use Cases
Root Mean Square Error (RMSE)	$\sqrt{\sum (y_i - \hat{y}_i)^2}$	Results in model predicting the <i>mean</i> ; lower ↓ is better
Mean Absolute Error (MAE)	$\frac{1}{n} \sum y_i - \hat{y}_i $	Less sensitive to outliers than RMSE; results in model predicting the <i>median</i> ; lower ↓ is better
R-Squared	$1 - \frac{\sum (\hat{y}_i - \bar{y})^2}{\sum (y_i - \bar{y})^2}$	Easy to interpret as the percentage of variation in the response that is explained by the model; higher ↑ is better
Log Likelihood	L	Does not require training/testing split; easy to compare linear models; adapts to different distributions; higher ↑ is better
Akaike Information Criterion (AIC)	$2k - 2 \log(L)$	Log Likelihood with a penalty for model complexity; lower ↓ is better
Bayesian Information Criterion (BIC)	$\log(n) k - 2 \log(L)$	Log Likelihood with a penalty for model complexity & sample size; lower ↓ is better