

SageMaker Model Quality Report

This report contains model insights and model quality information for candidate **WeightedEnsemble_L3_FULL**. The candidate was generated by the AutoML job **Canvas844601**.

The **WeightedEnsemble_L3_FULL** candidate is a trained **multiclass** model whose objective is to **Maximize** the **"accuracy"** quality metric.

Accuracy is the ratio of the number of correctly classified items to the total number of (correctly and incorrectly) classified items. It is used for binary and multiclass classification. It measures how close the predicted class values are to the actual values. Accuracy values vary between zero (0) and one (1): A value of 1 indicates perfect accuracy, whereas 0 indicates perfect inaccuracy.

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Autopilot job details

Title	Value
Autopilot candidate name	WeightedEnsemble_L3_FULL
Autopilot job name	Canvas844601
Problem type	multiclass
Objective metric	accuracy
Optimization direction	Maximize

Model quality report

Model quality information is generated by the Autopilot Local Model Insights. This report is for a **multiclass** problem. **688** rows were included in the evaluation dataset. The evaluation time occurred at **2023-04-04 19:36:32**.

Metrics table

	Metric Name	Value	Standard Deviation
	weighted_recall	0.671512	0.003720
	weighted_precision	0.685234	0.005841
	accuracy	0.671512	0.003720
	weighted_f0_5	0.667329	0.004485
	weighted_f1	0.659371	0.004204
	weighted_f2	0.663590	0.004042
	accuracy_best_constant_classifier	0.444767	0.007276
	weighted_recall_best_constant_classifier	0.444767	0.007276
	weighted_precision_best_constant_classifier	0.197818	0.006421
	weighted_f0_5_best_constant_classifier	0.222529	0.006869
	weighted_f1_best_constant_classifier	0.273841	0.007546
	weighted_f2_best_constant_classifier	0.355907	0.007905

Note The values of the performance metrics in this table may differ from the values reported by Autopilot. The differences tend to appear when training on smaller datasets. The values for the metrics in the table use all the training data once to estimate the performance of a model. Autopilot scores are calculated using k-fold cross-validation resampling method that train a machine learning algorithm on different subsets of the dataset. A score is then calculated for overall performance by averaging the resulting performance metrics for each trial.

Confusion matrix

The **confusion matrix** provides a way to visualize the accuracy of the predictions made by a classification model. The confusion matrix is a table that contains the percentages of correct and incorrect predictions for the actual labels. Each row in the confusion matrix indicates how an actual label was classified by the label predicted by the model. The percentage of accurate predictions are on the diagonal, from the upper-left to the lower-right corner. The off-diagonal percentages indicate the types of misclassifications that the model is predicting. These incorrect predictions are the confusion values.

NOTE: If a row shows Nan , it means the validation dataset doesn't have a row for that label.

Confusion Matrix

