

# Machine Learning Model Report

Model Name:	HOtels
Description:	for hotels
Model ID:	6d1ff8c5-1132-4725-9101-408438290f64
Generated:	2025-06-01 14:06:24
Best Model:	random_forest
Best Accuracy:	0.8977

## Dataset Summary

Total Rows:	36275
Total Columns:	19
Feature Columns:	18
Target Column:	status
Missing Values:	No
Target Classes:	2

## Feature Columns

ID, n\_adults, n\_children, weekend\_nights, week\_nights, meal\_plan, car\_parking\_space, room\_type, lead\_time, year, month, date, market\_segment, repeated\_guest, previous\_cancellations, previous\_bookings\_not\_canceled, avg\_room\_price, special\_requests

## Model Training Results

Model	Accuracy	CV Mean	CV Std
Random Forest	0.8977	0.8961	0.0045
Logistic Regression	0.8068	0.8064	0.0053
Naive Bayes	0.4453	0.4389	0.0082

### Best Model: Random Forest

Accuracy:	0.8977
Cross-Validation Mean:	0.8961
Cross-Validation Std:	0.0045
Model Type:	Random Forest

### Detailed Classification Report

Class	Precision	Recall	F1-Score	Support
Canceled	0.877	0.806	0.840	2416
Not_Canceled	0.907	0.944	0.925	4839
Macro Avg	0.892	0.875	0.882	7255
Weighted Avg	0.897	0.898	0.897	7255

## Confusion Matrix

	0	1
0	1947	469
1	273	4566