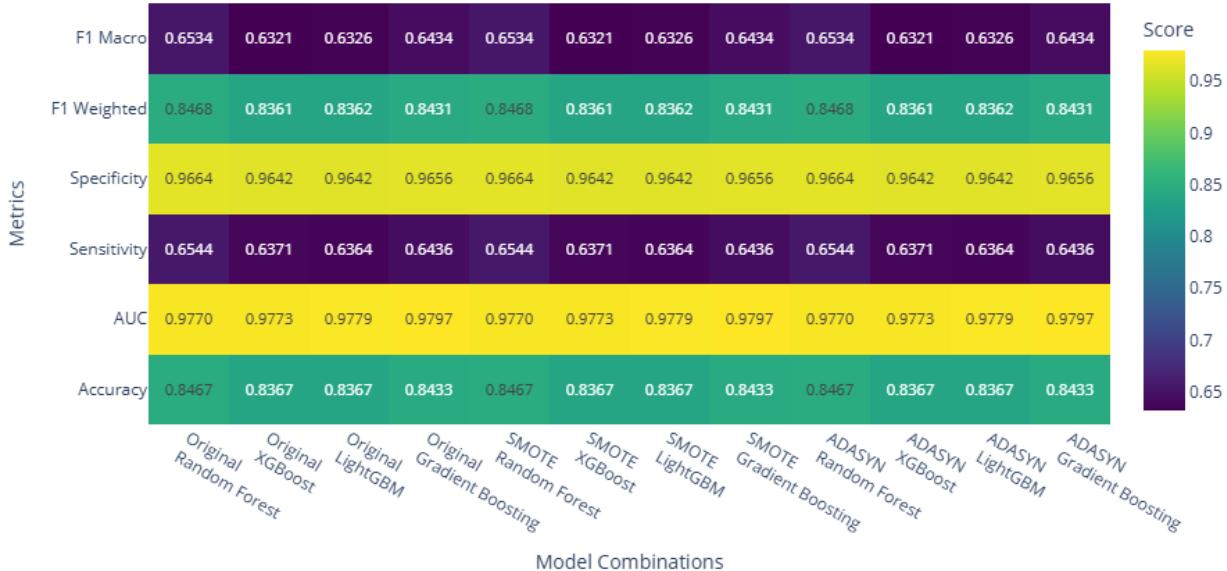


Enhanced Model Comparison Results
Color scale: ● ≥0.9 | ● 0.8-0.9 | ● 0.7-0.8 | ● <0.7

Dataset	Model	Accuracy	AUC	Sensitivity	Specificity	F1 Weighted	F1 Macro
Original	Random Forest	0.8467	0.977	0.6544	0.9664	0.8468	0.6534
Original	XGBoost	0.8367	0.9773	0.6371	0.9642	0.8361	0.6321
Original	LightGBM	0.8367	0.9779	0.6364	0.9642	0.8362	0.6326
Original	Gradient Boosting	0.8433	0.9797	0.6436	0.9656	0.8431	0.6434
SMOTE	Random Forest	0.8467	0.977	0.6544	0.9664	0.8468	0.6534
SMOTE	XGBoost	0.8367	0.9773	0.6371	0.9642	0.8361	0.6321
SMOTE	LightGBM	0.8367	0.9779	0.6364	0.9642	0.8362	0.6326
SMOTE	Gradient Boosting	0.8433	0.9797	0.6436	0.9656	0.8431	0.6434
ADASYN	Random Forest	0.8467	0.977	0.6544	0.9664	0.8468	0.6534
ADASYN	XGBoost	0.8367	0.9773	0.6371	0.9642	0.8361	0.6321
ADASYN	LightGBM	0.8367	0.9779	0.6364	0.9642	0.8362	0.6326
ADASYN	Gradient Boosting	0.8433	0.9797	0.6436	0.9656	0.8431	0.6434

Performance Heatmap - All Models & Metrics

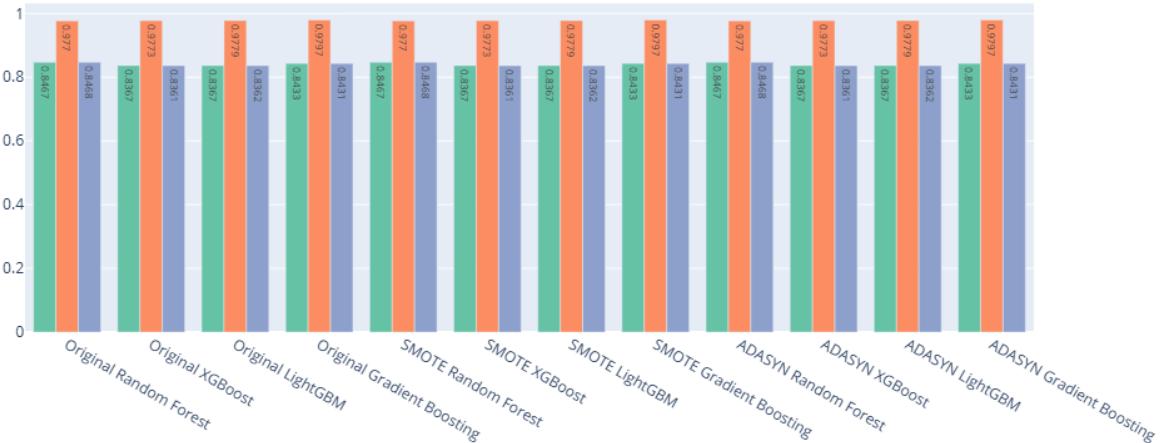


Comprehensive Model Analysis Dashboard

This table ranks the 12 model combinations based on their overall performance across three metrics: Accuracy, AUC, and F1_Weighted. The overall score is a weighted average of these three metrics.

Rank	Dataset	Model	Overall Score
2	Original	Random Forest	0.8582
8	Original	XGBoost	0.8503
11	Original	LightGBM	0.8503
5	Original	Gradient Boosting	0.8551
2	SMOTE	Random Forest	0.8582
8	SMOTE	XGBoost	0.8503
11	SMOTE	LightGBM	0.8503
5	SMOTE	Gradient Boosting	0.8551
2	ADASYN	Random Forest	0.8582
8	ADASYN	XGBoost	0.8503
11	ADASYN	LightGBM	0.8503

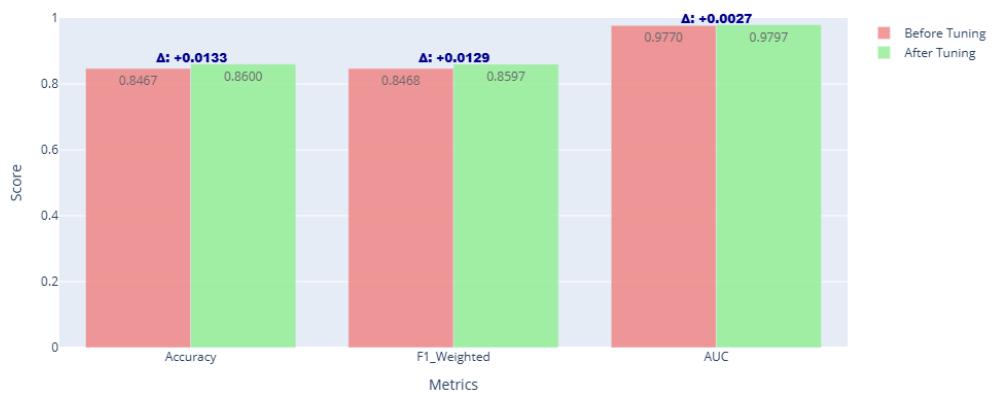
Performance Distribution



BEST PERFORMING MODEL			
Dataset	Model	F1-Weighted	
Original	Random Forest	0.8468	
Accuracy	AUC	Sensitivity	Specificity
0.8467	0.9770	0.6544	0.9664

Hyperparameter Tuning

Performance Improvement: Random Forest on Original Dataset



OPTIMIZED BEST MODEL			
Selected Model		Optimized F1-Score	
Random Forest			0.8597
Dataset: Original		Improvement: +0.0129	
Accuracy	0.8600	AUC Score	0.9797
CV Score	0.8367	Tuning Time	80.1s
Optimization Summary <ul style="list-style-type: none"> ✓ Parameter combinations tested: 50 ✓ Cross-validation folds: 5 ✓ Scoring metric: F1-Weighted ✓ Original F1-Score: 0.8468 ✓ Tuned F1-Score: 0.8597 ✓ Performance gain: +0.0129 			

Optimized Hyperparameters for Random Forest

N Estimators:	50	Min Samples Split:	5	Min Samples Leaf:	4
Max Features:	None	Max Depth:	15	Criterion:	entropy
Bootstrap:	True				

PROTOTYPE

Model Information
Deploy

Random Forest

MODEL TYPE

0.860
0.860

ACCURACY F1-SCORE

Credit Risk Analyzer

AI-Powered Credit Assessment System

Customer Information

Demographic Information

Occupation	Credit Limit (IDR)	
<input type="text"/>	25000000	- +
Marital Status	Loan Period (Months)	
<input type="text"/>	36	- +

Product Information

Product Type	Application Status
<input type="text"/>	<input type="text"/>
Sub Product	
<input type="text"/>	

Prescreening Results

SLIK Result	DHNBI Result
<input type="text"/>	<input type="text"/>
SIKPUR Result	Prescreening 1 Result
<input type="text"/>	<input type="text"/>
DUKAPIL Result	
<input type="text"/>	

ANALYZE CREDIT RISK

Quick Guide
Fill customer data
Click predict button

