Model Optimization and Tuning Phase Report

Date	05 July 2024
Team ID	739985
Project Title	Anticipating Business Bankruptcy
Maximum Marks	10 Marks

Model Optimization and Tuning Phase

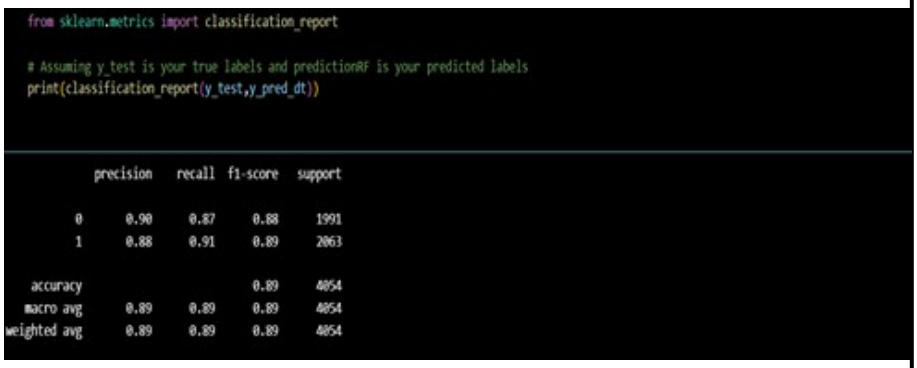
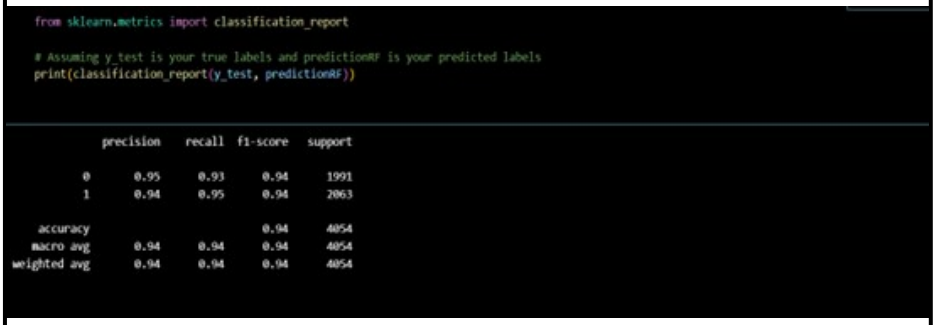
The Model Optimization and Tuning Phase involves refining machine learning models for peak performance. It includes optimized model code, fine-tuning hyperparameters, comparing performance metrics, and justifying the final model selection for enhanced predictive accuracy and efficiency.

Hyperparameter Tuning Documentation :

Model	Tuned Hyperparameters	Optimal Values
Decision Tree	-	-
Random Forest classifier	-	-
Support Vector classifier	-	-

NOTE: In our project not provided grid search and hyperparameters topic.

Performance Metrics Comparison Report :

Model	Optimized Metric
Decision Tree	
Random forest	
Support vector classifier	

Final Model Selection Justification (2 marks)

Final Model	Reasoning
Random Forest	The Random forest model was selected for its superior performance, exhibiting high accuracy with 94% . Its ability to handle complex relationships, minimize overfitting, and optimize predictive accuracy aligns with project

	objectives, justifying its selection as the final model.