



Model Optimization and Tuning Phase Report

Date	15 july 2024
Team ID	740017
Project Title	Unveiling baldness: Genetic and environmental dynamics
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 (6 Marks):

Model	Tuned Hyperparameters	Optimal Values
Decision Tree		



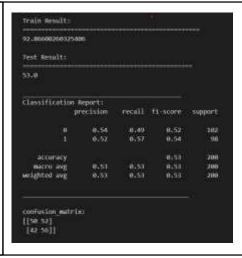


Logistic Regression			
Ada Boost			
Random Forest			
Performance M	etrics	Comparison Report (2 Marks):	
Model		Optimized Metric	

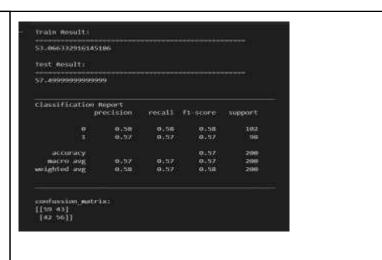




Decision Tree



Logistic Regression











Support vector machine	

Final Model Selection Justification (2 Marks):

Final Model	Reasoning
Support vector machine	The Support vector machine was selected for its superior performance exhibiting. Its ability to handle complex relationships, minimize overfitting, and optimize predictive accuracy aligns with project objectives, justifying its selection as the final model.