Model Optimization and Tuning Phase Report

Date	15 July 2024
Team ID	739706
Project Title	One year life expectancy post on Thoracic Surgery using machine learning
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

Random Forest		

Performance Metrics Comparison Report (2 Marks):

Model	Optimal Metric
Random Forest	

Final Model Selection Justification (2 Marks):

Final Model	Reasoning
Best random forest	The Random Forest model was selected for its superior performance, exhibiting hig accuracy during hyperparameter tuning. Its ability to handle complex relationship minimize overfitting, and optimize predictive accuracy aligns with project objectives, justifying its selection as the final model."