Model Optimization and Tuning Phase Template

Date	15 July 2024
Team ID	739646
Project Title	Number Oracle:Big Mart Sales Predictive Analysis
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.

Model	Baseline Metric	Optimized Metric
Random Forest	Accuracy: 0.607	Accuracy: 0.607
XGBOOST	Accuracy: 0.617	Accuracy: 0.617

Hyperparameter Tuning Documentation (6 Marks):

Random Forest	n_estimators, max_depth, min_samples_split	7
XGBOOST	max_depth	3

Final Model Selection Justification (2 Marks):

Final Model	Reasoning
XGBOOST	Chosen for its higher accuracy (0.61) compared to Random Forest (0.60) and simplicity.