

Model Optimization and Tuning Phase Report

Date	20 June 2024
Team ID	739768
Project Title	Opticrop:Smart Agricultural Production Optimization Engine
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
Logistic regression, Kmeans, Randomforest regression	-	-

Performance Metrics Comparison Report (2 Marks):

Model	Optimized Metric

Logistic regression, Kmeans, Randomforest regression	-
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Final Model Selection Justification (2 Marks):

Final Model	Reasoning
Random Forest regression	The Random Forest Regression model was selected for its superior performance, exhibiting high accuracy . Its ability to handle complex relationships, minimize over fitting, and optimize predictive accuracy aligns with project objectives, justifying its selection as the final model.