

## Model Optimization and Tuning Phase Report

Date	21 June 2024
Team ID	739772
Project Title	Gem Valuation Revolution: Predicting Diamond Prices With Artificial Neural Networks
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	–	–
Random Forest	–	–
KNN	–	–

Gradient Boosting	-	-
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**Performance Metrics Comparison Report (2 Marks):**

Model	Optimized Metric
Decision Tree	-

Random Forest	-
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KNN	-
Gradient Boosting	-

**Final Model Selection Justification (2 Marks):**

Final Model	Reasoning
Gradient Boosting	