Model Optimization and Tuning Phase Template

Date	11-03-2025
Team ID	739955
Project Title	AI-POWERED VEHICLE DAMAGE ASSESSMENT FOR COST ESTIMATION AND INSURANCE CLAIMS.
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
Model 1	------	----
Model 2	-----	-----
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Performance Metrics Comparison Report (2 Marks):

Model	Optimized Metric

Vgg16	
Vgg16	

Final Model Selection Justification (2 Marks):

Final Model	Reasoning
Vgg16	I was chosen vgg16 model due to its proven performance in image classification tasks and its simplicity in architecture and also it's ability to extract hierarchical image features made it suitable for accurately identifying and classifying vehicle damage types.