

**Model Optimization and Tuning Phase Template**



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| Project Title | Harvesting Brilliance: A Taxanomic Tale of  Pumpkin Seeds Varieties |
| Maximum Marks | 10 Marks |

**Model Optimization and Tuning Phase**

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| **Model** | **Baseline Metric** | **Optimized Metric** |
| Model 1 | Baseline value | Optimized value |

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):**

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| --- | --- | --- |
| **Model** | **Tuned Hyperparameters** | **Optimal Values**  Value1, Value2, ...  Value1, Value2, ...  ... |
| Model 1 | Hyperparam1, Hyperparam2, ... Hyperparam1, Hyperparam2, ... |
| Model 2 |
| ... | ... |

**Performance Metrics Comparison Report (2 Marks):**

|  |  |  |
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| Model 2 | Baseline value | Optimized value |

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

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| --- | --- |
| **Final Model** | **Reasoning**  Explanation of why this model was chosen as the final optimized model |
| Model 1 (or other) |