Model Optimization and Tuning Phase Report

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| Date | 15 March 2024 |
| Team ID | 739927 |
| Project Title | Smart Lender |
| 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

Perform ancemetrics, and justifying the final mode lselection for enhanced predictive accuracy and efficiency.

**Hyperparameter Tuning Documentation(6Marks):**

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| **Model** | **Tuned Hyperparameters** | **Optimal Values** |

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| **Logistic Regression** | C:\Users\DELL\Desktop\log.PNG | C:\Users\DELL\Desktop\logtest.PNG |

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

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| **Model** | **Optimized Metric** |
| **Logistic Regression** | C:\Users\DELL\Desktop\ma.PNG |

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

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| **Final Model** | **Reasoning** |
| Logistic Regression | The Logistic Regression model was selected for its superior performance,exhibiting high accuracy during hyperparameter tuning. Its ability to handle complex relationships, minimize overfitting, and optimize predictive accuracy aligns with project objectives,justifying its selection as the final model. |