**Model Optimization and Tuning Phase Template**

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| Date | 15 March 2024 |
| Team ID | 740018 |
| Project Title | Determine : Loan from KIVA crowdfunding data |
| Maximum Marks | 10 Marks |

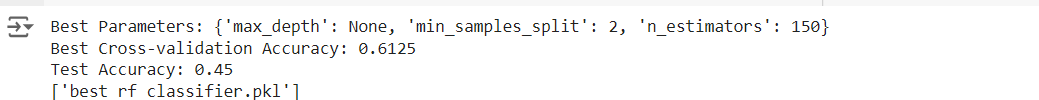
**Model Optimization and Tuning Phase**

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):

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

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



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

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