**Model Optimization and Tuning Phase**

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| Date | 12 JULY 2024 |
| Team ID | SWTID1720438678 |
| Project Title | Early prediction of chronic kidney disease. |
| 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** |
| Logistic regression | None | Value1, Value2, ... |
| Random forest | None | Value1, Value2, ... |
| Decision tree | None | ... |
| SVM | None |  |

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

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| --- | --- | --- |
| **Model** | **Baseline Metric** | **Optimized Metric** |
| Model 1 | Baseline value | Optimized value |
| Model 2 | Baseline value | Optimized value |

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

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| --- | --- |
| **Final Model** | **Reasoning** |
| Logistic regression | Has highest accuracy,F1 score,Precision,Recall |