

Model Optimization and Tuning Phase Template

Date	15 March 2024
Team ID	xxxxxx
Project Title	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):

Model	Tuned Hyperparameters	Optimal Values
Logistic Regression	<pre>model = LogisticRegression(max_iter=10000) rfe = RFE(model, n_features_to_select=10) X_rfe = rfe.fit_transform(X_k_best_df, y)</pre>	95%
Naïve Baye	-	100%
Random Forest Classifier	-	100%

Performance Metrics Comparison Report (2 Marks):

Model	Baseline Metric	Optimized Metric
Logistic Regression	95	97
Naïve Bayes	100	100
Random Forest	100	100

Final Model Selection Justification (2 Marks):

Final Model	Reasoning
Random Forest Classifier	This model was chosen above all other model since it has given 100 accuracy in the model both in training and testing data