Model Development Phase Template

Date	10 July 2024
Team ID	740673
Project Title	**TRAFFICTELLIGANCE-Advanced Traffic Volume Estimation With Machine Learning**
Maximum Marks	6 Marks

Model Selection Report

In the forthcoming Model Selection Report, various models will be outlined, detailing their descriptions, hyperparameters, and performance metrics, including Accuracy or F1 Score. This comprehensive report will provide insights into the chosen models and their effectiveness.

Model	Description	Hyperparameters	Performance Metric (e.g., Accuracy, F1 Score)
Random Forest	Ensemble of decision trees; robust, handles complex relationships, reduces overfitting, and provides feature importance for traffic prediction.	-	Accuracy score = 81%
Decision Tree	Simple tree structure; interpretable, captures non-linear relationships, suitable for initial insights into traffic patterns.	-	Accuracy score = 73%
KNN	Classifies based on nearest neighbors; adapts well to data patterns, effective for local variations in traffic prediction criteria.	-	Accuracy score = 77%

Gradient Boosting	Gradient boosting with trees; optimizes predictive performance, handles complex relationships, and is suitable for accurate traffic predictions.	-	Accuracy score = 81%