

Project Development Phase
Model Performance Test

Date	27 June 2025
Team ID	LTVIP2025TMID42078
Project Name	TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning
Maximum Marks	4

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values
1.	Model Summary	Regression model using ensemble method. Models tried: Linear Regression, XGBoost, RandomForest. Final model used: RandomForestRegressor.
2.	Accuracy	R² Score : 0.8316 RMSE: 811.41
3.	Fine-Tuning Result (if done)	Improved validation score after hyperparameter tuning. Tuned n_estimators, max_depth, and used grid search. Final R² after tuning: 0.8316.