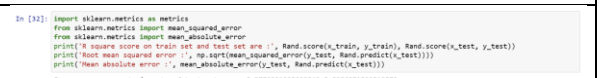
Project Development Phase
Model Performance Test

Date	18 November 2023
Project Name	TrafficTelligence: Advanced Traffic Volume Estimation With Machine Learning
Maximum Marks	10 Marks

Model Performance Testing:

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

S.No.	Parameter	Values	Screenshot
1.	Metrics	**Regression Model:** Random Forest Regressor MAE - 507.9025692355565, RMSE - 801.6894273058929 R2 score: On Test - 0.8356571592510573 On Train - 0.9770921235220543	
2.	Tune the Model	**Hyperparameter Tuning:** Result of Hyperparameter tuning - {'max_depth': 23, 'n_estimators': 24} After Hyperparameter Tuning: R square score: On Train - 0.964255906132786 On Test - 0.8284691833318581 Root mean squared error: 819.0338269811183 Mean absolute error: 516.6675220665472 After PCA: R square score: On Train - 0.9718652757585765 On Test - 0.8032429906444858 Root mean squared error: 877.1944347759498 Mean absolute error: 590.8631417902708 Validation Method - Train – Test split