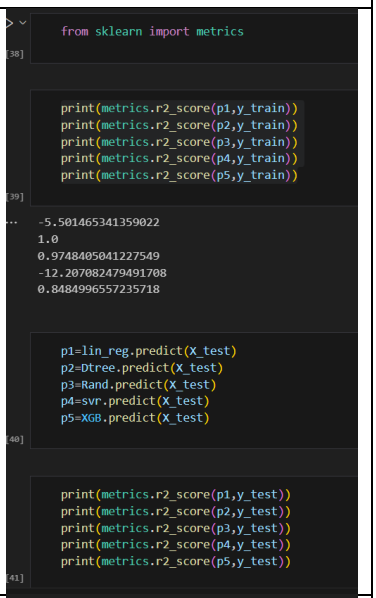
Project Development Phase
Model Performance Test

Date	6 JUNE 2025
Team ID	LTVIP2025TMID33800
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:** MAE - , MSE -798.224688107 , RMSE - -5.501465341359022 1.0 , R2 score -5.365880084970492 0.6972692069667399 0.8032224259884193 -11.986624908714628 0.8092036247253418 **Classification Model:** Confusion Matrix - , Accuray Score- & Classification Report -	
2.	Tune the Model	Hyperparameter Tuning - Applied GridSearchCV on the Random Forest model to tune the number of estimators (n_estimators) and maximum tree depth (max_depth). Best parameters identified: n_estimators = 100, max_depth = 10 • Validation Method - Train/Test Split (80% training and 20% testing) Cross-Validation Score also calculated using	

		cross_val_score() for additional stability.	