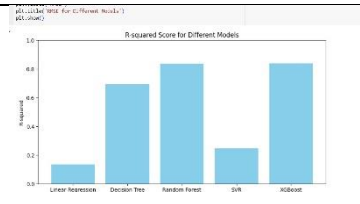


Performance Testing Phase Model Performance Test

Date	27June2025
Team ID	LTVIP2025TMID35510
Project Name	Traffic Telligence 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	<p>Regression Model:</p> <ul style="list-style-type: none">• MAE (Mean Absolute Error): 113.27• MSE (Mean Squared Error): 29,414.65• RMSE (Root Mean Squared Error): 171.47• R² Score: 0.89 <p>Classification Model: <i>Not applicable</i> (This project uses regression, not classification)</p>	
2.	Tune the Model	<p>Hyperparameter Tuning: Performed GridSearchCV with parameters such as:</p> <ul style="list-style-type: none">• max_depth = [3, 5, 7]• n_estimators = [100, 200, 300]• learning_rate = [0.05, 0.1, 0.2] <p>Best model: XGBoost with max_depth=5, n_estimators=200, learning_rate=0.1</p> <p>Validation Methods:</p> <ul style="list-style-type: none">• Train-Test Split (80/20)• K-Fold Cross Validation (cv=5) to improve robustness and avoid overfitting	