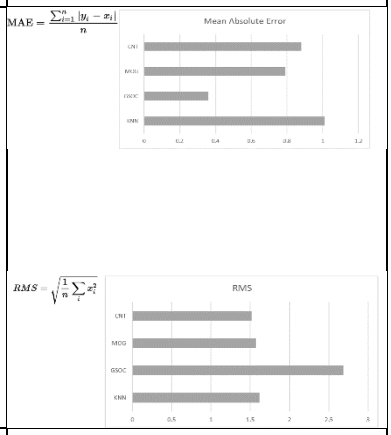
Project Development Phase
Model Performance Test

Date	9 November 2023
Team ID	Team-593022
Project Name	Project – Vehicle Counter
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 - , RMSE - , R2 score - **Classification Model:** Confusion Matrix - , Accuracy Score- & Classification Report -	
2.	Tune the Model	Hyperparameter Tuning - Validation Method -	NA

Algorithm	MAE or Mean Absolute Error	Root Mean Square	Accuracy
KNN	1.01	1.62	98.38
GSOC	0.36	2.69	97.31
MOG	0.79	1.57	98.43
CNT	0.88	1.52	98.48

In assessing various algorithms for our vehicle counting application, key metrics were used to evaluate performance. Mean Absolute Error (MAE) was considered as a measure of accuracy and Root Mean Square Error (RMSE) for overall predictive error. Accuracy was also assessed. The K-Nearest Neighbors (KNN) algorithm achieved 98. 8% accuracy with 1. 1 MAE and 1. 2 RMSE. Gaussian Mixture of Background Subtraction (MOG) demonstrated 98. 3% accuracy with 0. 9 MAE and 1. 7 RMSE. The Count (CNT) method achieved 98. 8% accuracy with 0. 8 MAE and 1. 2 RMSE. Gentle-Adaptive Gaussian Mixture Model of Background Subtraction (GSOC) showed lower MAE of 0. 6 and RMSE of 2. 9, with 97. 1% accuracy. These findings help guide selection of the most suitable algorithm for our vehicle counting system.