**Project Development Phase**

**Model Performance Test**

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| Date | 16 July 18, 2025 |
| Team ID | LTVIP2025TMID44001 |
| 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.

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| **S.No.** | **Parameter** | **Values** | **Screenshot** |
|  | Metrics | **Regression Model:**, MSE |  |
|  | Tune the Model | |  |  | | --- | --- | | **Hyperparameter Tuning**:  - For XGBoost: n\_estimators=100,  learning\_rate=0.1, max\_depth=5  - For Random Forest:  n\_estimators=200,  max\_depth=10 | 📸 *Attach tuning code snippet or grid search output* |  |  |  |  | | --- | --- | --- | |  | **Validation Method**  train\_test\_split() with test\_size=0.2 and random\_state=0  Evaluation on both train and test sets (holdout validation) |  | |  |