**Project Development Phase**

**Model Performance Test**

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| Date | 24 June 2025 |
| Team ID | LTVIP2025TMID35493 |
| Project Name | TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning |
| Maximum Marks |  |

**Model Performance Testing:**

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| **S.No.** | **Parameter** | **Values** | **Screenshot** |
|  | Model Summary | - Machine Learning model for traffic prediction and route optimization - Algorithms used: Random Forest, XGBoost - Input Features: vehicle count, speed, road type, time, date, location - Output: congestion level, estimated travel time |  |
|  | Accuracy | Training Accuracy – 97.2%  Validation Accuracy -95.8% |  |
| 3. | Fine Tunning Result( if Done) | Validation Accuracy -96.7%  Hyperparameters tuned: max\_depth, n\_estimators, learning\_rate |  |