**User Acceptance Testing (UAT) Template**

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| Date | 28 june 2025 |
| Team ID | LTVIP2025MID444706 |
| Project Name | Traffic Volume Estimation |
| Maximum Marks |  |

**Project Overview:**

Project Name:Traffic Volume Estimation

Project Description: TrafficTelligence is an advanced traffic management system that leverages machine learning algorithms to estimate and predict traffic volume with high precision. By analyzing historical traffic data, weather patterns, events, and other relevant factors, it provides accurate forecasts to enhance traffic flow, support urban planning, and improve commuter experiences. The system supports dynamic traffic control, infrastructure design, and real-time navigation, aiming to reduce congestion and optimize urban mobility.

Project Version: 1.0

Testing Period: [1st june 2025] to [20 june 2025]

**Testing Scope:**

* Real-Time Data Integration
* Dynamic Traffic Management
* Urban Planning Insights
* Commuter Navigation Support
* Data Input Validation
* Performance and Scalability
* As a Transportation Authority, adjust signal timings with real-time estimates.
* As an Urban Planner, plan roads with 5-year predictions.
* As a Commuter, get fastest routes to avoid delays.
* As a System User, ensure valid data inputs.
* As a Developer, handle multiple API requests.

**Test Cases:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Case ID** | **Test Scenario** | **Test Steps** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| TC-001 | Traffic Volume Prediction | -Input historical data (e.g., 500 vehicles/hour)  -Run prediction model  - Compare with test data | Predicts within 5% of actual (e.g., 475-525 vehicles/hour) | Predicts 490 vehicles/hour | pass |
| TC-002 | Real-Time Data Integration | Simulate real-time traffic update (e.g., 300 vehicles/hour)  -Verify update in system  Check response time | Updates within 2 seconds | Updates in 1.8 seconds | pass |

**Bug Tracking:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Bug ID** | **Bug Description** | **Steps to reproduce** | **Severity** | **Status** | **Additional feedback** |
| BG-001 | Prediction model overestimates traffic volume | [Step 1] Input historical data (500 vehicles/hour) [Step 2] Run prediction  [Step 3] Compare with actual (450 vehicles/hour) High Open Check model training data for bias BG-002 Real-time data update fails | High | open | Check model training data for bias |
| ... | ... | ... | ... | ... | ... |

**Sign-off:**

Tester Name: jammu.kalyani

Date: 20 june 2025

Signature: j.kalyani