**User Acceptance Testing (UAT) Template**

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| Date | 16 July 2025 |
| Team ID | LTVIP2025TMID44001 |
| Project Name | TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning |
| Maximum Marks |  |

**Project Overview:**

Project Name: TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning

Project Description: A machine learning–powered web application for estimating traffic volume using weather and calendar data inputs.

Project Version: v1.0

Testing Period: 26 June 2025 to 29 june 2025

**Testing Scope:**

** Features to be Tested:**

* Input validation (temperature, rain, snow, holiday, date)
* ML model prediction accuracy
* Response time of traffic estimation
* Error handling and user feedback
* User interface behavior and responsiveness

** User Stories to be Tested:**

* As a user, I can input weather and date info and get accurate traffic volume predictions.
* As a user, I am notified when inputs are invalid.
* As a user, I expect quick responses (under 3 seconds) after clicking predict.

**Testing Environment:**

** URL/Location**: http://127.0.0.1:5000 (Local Flask Web App)

** Credentials (if required):** Not Applicable

**Test Cases:**

| **Test Case ID** |  | **Test Scenario** |  | **Test Steps** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| TC-001 |  | Valid Input Prediction |  | 1. Open web app 2. Input valid values 3. Click Predict | Traffic volume is estimated and displayed correctly | Traffic volume shown | Pass |
| TC-002 |  | Invalid Numeric Input |  | 1. Enter letters in temperature field 2. Click Predict | App shows validation error message | Error message shown | Pass |
| TC-003 |  | Empty Fields |  | 1. Leave all fields blank 2. Click Predict | Prompt for required inputs | Prompts shown | Pass |
| TC-004 |  | Response Time Test |  | 1. Input data 2. Measure time to result | Response under 3 seconds | 1.89 seconds | Pass |
| TC-005 |  | Browser Compatibility |  | 1. Test on Chrome, Edge, Firefox | Consistent behavior and display | Consistent | Pass |

Bug Tracking:

| Bug ID | Bug Description | Steps to Reproduce | Severity | Status | Additional Feedback |
| --- | --- | --- | --- | --- | --- |
| BG-001 | App crashes on blank submit in older Safari | 1. Open in Safari 2. Click Predict with no inputs | Medium | Open | Might need frontend JS validation |
| BG-002 | Minor UI overlap on small screen devices | 1. Use 320px width screen 2. View button layout | Low | In Progress | Suggest responsive layout update |

**Sign-off:**

Tester Name: Radharapu Sai Bhavya

Date: 29 June 2025

Signature: Radharapu Sai Bhavya

**Notes:**

**Notes**

* All test cases include both valid and invalid scenarios.
* Bugs have been reported with reproducible steps and severity level.
* Ensure project manager & mentor approve before final deployment.