# **Functional & Performance Testing Template**

**Model Performance Test**

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| Date | 16 July 19, 2025 |
| Team ID | LTVIP2025TMID44001 |
| Project Name | TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning |
| Maximum Marks |  |

## **Test Scenarios & Results**

| **Test Case ID** | **Scenario (What to test)** | **Test Steps (How to test)** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| --- | --- | --- | --- | --- | --- |
| FT-01 | Text Input Validation (e.g., dropdowns for holidays, weather) | Enter valid and invalid text or leave fields empty | Valid inputs accepted, errors for invalid/empty inputs | Valid inputs accepted, invalid handled | Pass |
|  |  |  |  |  |  |
| FT-02 | Number Input Validation (e.g., temperature, rain, snow) | Enter numbers within and outside acceptable ranges | Accepts valid values, errors on out-of-range | Worked as expected | Pass |
|  |  |  |  |  |  |
| FT-03 | Prediction Output Generation | Fill all input fields and click **"Predict"** | Predicted traffic volume is displayed accurately | Traffic volume displayed successfully | Pass |
|  |  |  |  |  |  |
| FT-04 | Flask API Connection Check | Run app and access route (e.g., http://127.0.0.1:5000/) | Server starts and returns response | Server running and responding | Pass |
|  |  |  |  |  |  |
| PT-01 | Response Time Test | Use a stopwatch or timer to measure time after submitting prediction | Should respond within **3 seconds** | ~1.8 seconds | Pass |
|  |  |  |  |  |  |
| PT-02 | Concurrent Requests/API Speed Test | Open multiple tabs or use Postman to send simultaneous prediction requests | App should respond without lag or crash | Handled concurrent requests fine | Pass |
|  |  |  |  |  |  |
| PT-03 | File Load/Crash Resistance Test | Upload heavy or multiple CSV files or refresh while app is loading | App should not crash or freeze | No crash observed | Pass |