User Acceptance Testing (UAT) Template

Date	10 February 2025
Team ID	LTVIP2026TMIDS87694
Project Name	EV Battery Performance and Range Monitoring System
Maximum Marks	4

Project Overview: EV Battery Performance & Range Monitoring System

Project Name: EV Battery Performance and Range Monitoring System
Project Description: Real-time EV range prediction and visualization platform using ML models (Random Forest R²=87%) on 339k EV records. Features registration, dashboard, charge analytics for Indian EV users (Tata Nexon, MG ZS).
Project Version: 2.1.0 (Sprint-2 Complete)
Testing Period: 24 Oct 2022 - 19 Nov 2022 (4 Sprints)

Testing Scope:

- **Features: User Registration/Login, EV Dashboard (7 charts), Range Prediction API, Data Filters, Power BI/Tableau Vizes**

- **User Stories: USN1-11 (Sprint 1-2): Registration (6pts), Dashboard (14pts), Predictions (5pts)**

Testing Environment:
URL/Location: localhost:8080/ev-dashboard (React + Flask) | Tableau Server: hyderabad-ev.tableau.com
Credentials: testuser@ev.com / Battery123!

Test cases:

Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result	Pass/Fail
TC-001	Registration Flow	1. Enter email/password 2. Confirm password 3. Submit	User registered, email sent, dashboard loads	Success + "Welcome" email	Pass
TC-002	Range Prediction	1. Login → Dashboard 2. Select "Tata Nexon" 3. Battery=60%, Generate	280-300km predicted (R^2=87%)	285km shown w/ confidence badge	Pass
TC-003	Data Filters	1. Hyderabad	Red "High	47 chargers	Pass

Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result	Pass/Fail
		filter 2. Battery<20% 3. Apply	Risk" alerts + map pins	shown + 12% risk alert	
TC-004	Dashboard Load	1. Refresh page 2. All 7 charts load	<3s total load time	2.1s load (Perf Analyzer)	Pass
TC-005	Invalid Input	1. Battery=-10% 2. Range=1000 km 3. Submit	Error: "Invalid range"	Red toast: "Battery 0-100%"	Pass
TC-006	Negative: Duplicate Email	1. Register existing email 2. Submit	"Email exists" error	Error shown + login redirect	Pass

Bug Tracking

Bug ID	Bug Description	Steps to Reproduce	Severity	Status	Additional Feedback
BG-001	Map zoom slow on mobile	1. Mobile view 2. Pinch zoom chargers 3. 5+ seconds lag	Medium	Closed	Fixed: Debounced zoom + WebGL
BG-002	Filter reset clears predictions	1. Generate prediction 2. City filter→reset 3. Prediction vanishes	Low	Closed	Fixed: Persist predictions in Redux
BG-003	Edge case: 0% battery	1. Battery=0% 2. Predict range	NaN error	High	Closed - Now shows "Immediate

Bug ID	Bug Description	Steps to Reproduce	Severity	Status	Additional Feedback
					Charge Needed"
BG-004	PDF export cuts KPI cards	1. Dashboard→Export PDF 2. Bottom cards missing	Medium	In Progress	Testing responsive layout fix

Updated Project Sign-off (with Ashok Reddy Signature)

**Tester Name: Ashok Reddy - EV Data Analyst
Date: 19 feb 20226**

Signature: Ashok Reddy

**Project Manager: Sprint-2 Velocity 20/20pts achieved
Product Owner: Ready for AWS Mumbai deployment**

Deployment Approved ✅