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GEO-INTEL LAB

AI-POWERED INTELLIGENT ENERGY & MOBILITY OPTIMIZATION PLATFORM

Transportation and Infrastructure

Pilot District
Washim, Maharashtra

Geospatial Innovation Accelerator
SINE, IIT Bombay

Technology Summary
Urjeevi Labs is developing an AI-powered intelligent energy and mobility optimization platform designed to enhance the efficiency, safety, and lifespan of electric vehicle (EV) batteries and mobility systems.

The system leverages machine learning, sensor analytics, and predictive modeling to monitor energy usage, predict degradation, and suggest optimal charging and driving behaviors.

It's a modular, adaptive platform that supports diverse applications — from two-, three-, and four-wheel EVs to drones, micro-mobility, and delivery fleets.

The technology also integrates real-world environmental and geospatial data, enabling context-aware optimization suited for Indian conditions — from urban to semi-rural environments.

Technology Readiness Level:
4

Value Proposition:
- Extends battery life by 20–30% through intelligent optimization
- Improves range and performance reliability under Indian conditions
- Reduces energy wastage and operational costs
- Enables predictive maintenance and safety alerts
- Scalable across multiple EV categories — from scooters to fleets and drones
- Contributes to clean mobility and sustainable innovation in India

Market Potential / Deployment Plan & Business Scale Strategy:
Current Stage:
- AI models and analytics modules validated (TRL 4–5)
- Ground research completed in Washim District, Maharashtra
- Solution refined based on user pain points, charging behavior, and infrastructure gaps

Phase 1 – Proof of Concept (0–9 months):
- Complete in-house PoC and system integration at IIT Bombay
- Validate AI algorithms using real EV data
- Develop pilot-ready hardware-software setup

Phase 2 – Pilot Deployment (9–18 months):
- Deploy pilots at IIT Bombay, Mumbai Suburban areas, and Washim
- Partner with EV OEMs, fleet operators, and academic testbeds
- Evaluate performance, scalability, and user adoption

Phase 3 – Scale-Up & Commercialization (18–36 months):
B2C, B2B, B2G/CSR/NGO partnerships

Geographical Expansion Plan:
- Begin with Maharashtra (Mumbai, Pune, Nashik)
- Scale to other metro and Tier-2 cities through strategic partnerships
- Leverage academic and industry collaborations for rapid adoption

Applications:
- Electric two-, three-, and four-wheelers
- Drones and logistics fleets
- Battery energy storage systems
- Charging and grid-integrated platforms
- Fleet analytics and predictive maintenance dashboards

Environmental / Social Impact:
- Reduces carbon emissions by improving EV efficiency
- Extends battery lifespan, reducing e-waste
- Promotes energy-efficient transportation
- Encourages grassroots innovation and atmanirbhar bharat mission in clean mobility and sustainability

## Contribution to Sustainable Development Goals (SDGs):
SDG 7, 9, 11, & 12

Urjeevi Labs Contribution
- Improves energy efficiency and utilization in EVs
- Builds indigenous AI technologies for clean tech
- Enables clean and reliable electric mobility
- Reduces battery waste through life extension
- Supports emission reduction and sustainable transport

Urjeevi Smart Mobility Intelligence Platform
AI-powered Optimization for EV Systems
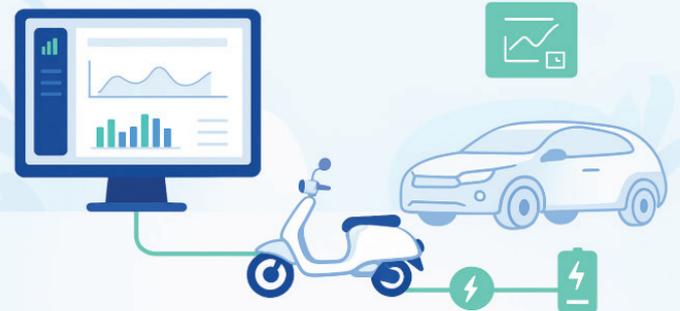
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