SMART INDIA HACKATHON 2025

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- **Problem Statement ID- SIH25002**
- **Problem Statement Title- Smart Tourist Safety Monitoring & Incident Response System using AI, Geo-Fencing, and Blockchain-based Digital ID**
- **Theme- Travel & Tourism**
- **PS Category- Software**
- **Team ID- SR2538**
- **Team Name- ResQTech**

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SafeTrip

Smart Tourist Safety Monitoring & Incident Response System

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❖ Detail Description

Problem – Are tourists really safe ?

➢ **Tourists lack real-time safety, secure ID, and quick emergency response — current systems are slow, reactive, and unreliable.**

❖ Proposed Solution

Tourist Mobile App

➢ Provides safety score, geo-fencing alerts, panic button, live location sharing, and multilingual support.

Blockchain Digital ID

➢ Issued at entry based on Aadhaar/Passport, valid only for the visit duration.

AI Anomaly Detection

➢ Detects route deviation, drop-offs, and inactivity to generate predictive safety alerts.

Geo-Fencing

➢ Creates virtual boundaries to monitor tourist movement and trigger alerts.

Authority Dashboard

➢ Displays tourist heatmaps, alert history, automated e-FIR, and digital ID access.

IoT Wearables

➢ Optional smart bands/tags for high-risk zones like caves and forests.

❖ How it Address The Problem

Feature	Tourist App	Authority Dashboard
Digital Identity	Secure identity & data protection	None
Navigation	Prevents entry into unsafe areas	None
Alerts	Real-time warnings for quick response	None
Emergency Assistance	Instant help in emergencies	None
Tracking	None	Reduces missing person cases
Monitoring	None	Detects risks & anomalies fast
Incident Handling	None	Rapid response & evidence logging
Data Analysis	None	Smarter resource allocation, safer tourism

❖ Uniqueness

- **Automated e-FIR & Logs** → Auto-generate reports with police integration.
- **Proactive** → Prevents incidents, not just responds.
- **Unified Ecosystem** → ID, AI, police, IoT, languages in one.
- **Region-specific** → Adapts to local risks & conditions.

❖ Innovation

- Blockchain + AI + Geo-fencing
- Tourist Safety Score
- Multilingual + Accessibility Features
- IoT Wearable Integration

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TECHNICAL APPROACH

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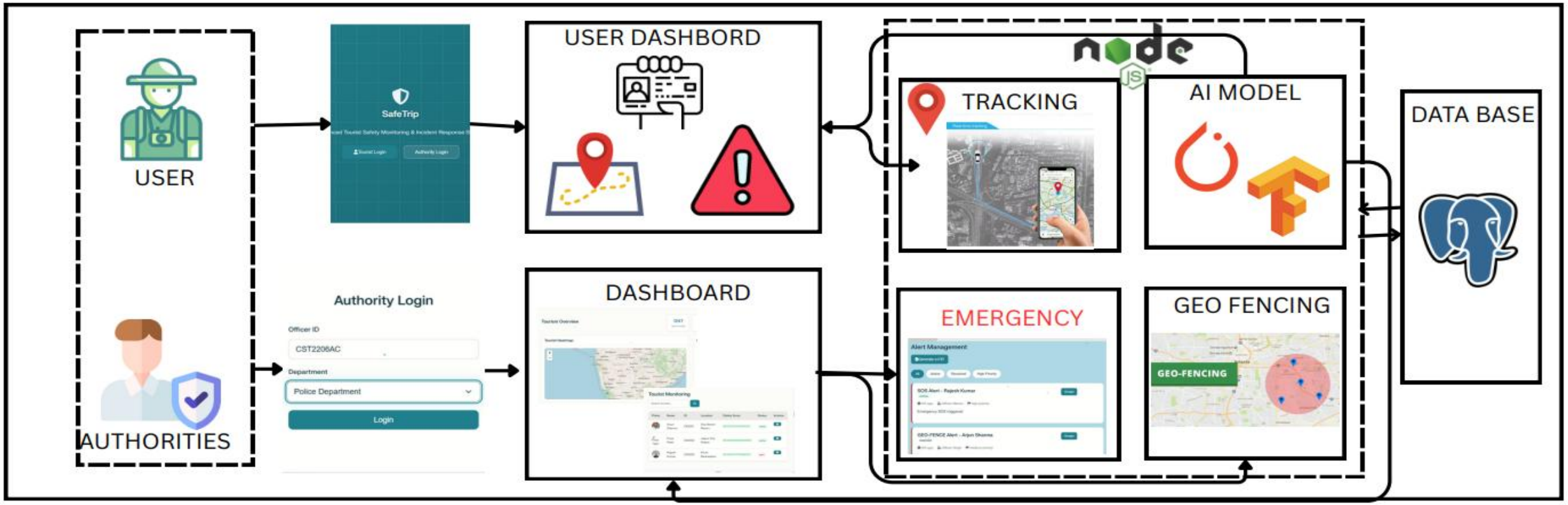
TECH-STACK

FRONTEND	BACKEND	DATABASE	GEO-FENCING	AI MODELS	CLOUD
Flutter, React	Node.js, Django REST framework	PostgreSQL, MongoDB	API	PyTorch, TensorFlow	AWS



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FEASIBILITY AND VIABILITY

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FEASIBILITY | CHALLENGES AND RISK | STRATEGIES | VIABILITY

Feasibility & Viability

Feasibility

- Smartphones + 4G/5G (IoT optional)
- Cloud deployment (AWS/Azure)
- Aadhaar/Passport KYC integration

Challenges

- Data privacy & consent
- Remote areas with poor connectivity.
- User adoption & trust in digital IDs.

Strategies

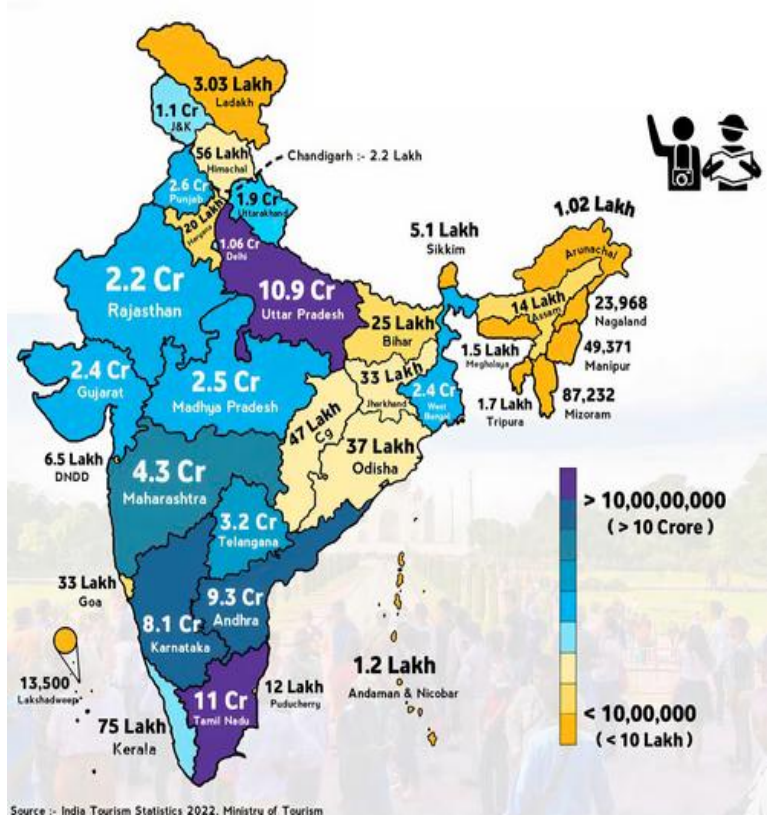
- Encryption + GDPR/DPDP compliance
- Offline-first app with sync
- Awareness campaigns + pilot rollouts

Viability

- Builds tourist trust & safety confidence
- Boosts tourism revenue & local economy
- Supports government's Smart City & Digital India vision

Primarily supported by – Ministry of Tourism, Ministry of Home Affairs, State Police Departments

Estimating Tourism Market Size



- Smart tourist safety solutions: $200-250M Opportunity
- India to lead in smart tourism safety tech

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IMPACT AND BENEFITS

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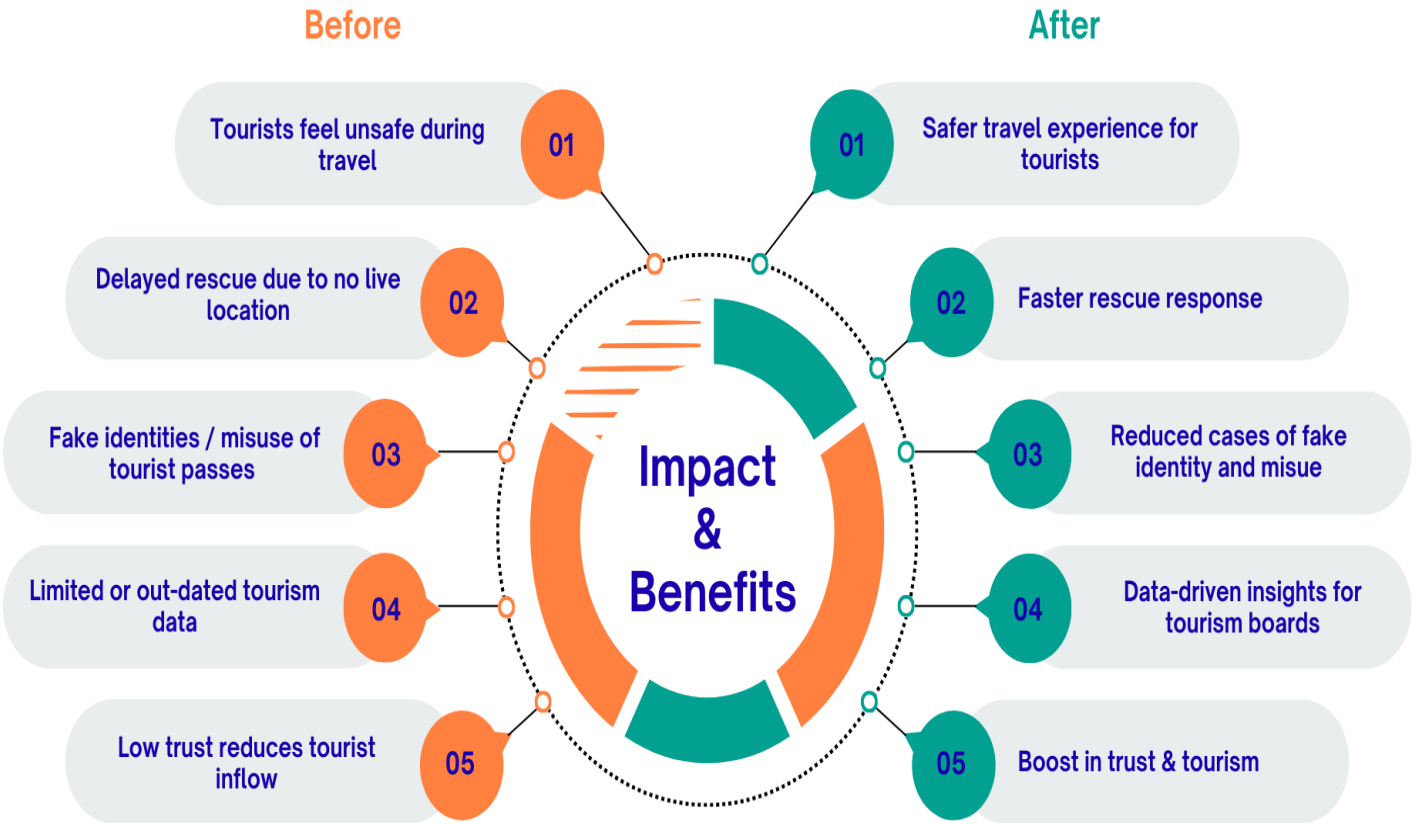
#TravelSafeIndia → Boosting Safety, Trust & Tourism Growth

IMPACT ON TARGET AUDIENCE

- **Tourists:** Enhanced safety, real-time help, peace of mind.
- **Police/Tourism Departments:** Faster response, reduced manual tracking.
- **Local Communities:** Boost in safe tourism, increased trust.



BENEFITS

- **Social:** Protects vulnerable travellers (elderly, solo, women).
- **Economic:** Increases tourist confidence → more inflow → regional growth.
- **Environmental:** Reduced search operations (saves resources).

POTENTIAL

Scales to nationwide safety network, where multiple states can **share tourist data securely** and provide **uniform safety assurance across india.**

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RESEARCH AND REFERENCES

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1. 🔍 Reports, Government Sources, & Research Papers

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- L. Chen, P. Zhao, and Y. Liu, "Deep Learning-based Visitor Monitoring," Springer, 2022.. 🔗 Journal of Combinatorial Mathematics
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- Ministry of Tourism, Government of India, Tourist Safety Guidelines, 2023. [Online]. 🔗 Link
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- Thailand Tourist Police, Tourist Police App, 2022. 🔗 Link

2. 💡 Insights Gained From Research

- **Research Done:** Studied real-time location tracking and boundary alerts for tourist safety.
- **Application:** Implemented geo-fencing alerts in app to warn tourists entering high-risk zones.

- **Research Done:** Analyzed visitor movement patterns to detect unusual behavior and inactivity.
- **Application:** Applied AI anomaly detection to flag missing or silent tourists.

- **Research Done:** Reviewed global safety protocols and emergency response systems.
- **Application:** Designed SOS button + real-time alert system for emergencies.

- **Research Done:** Studied best practices in travel safety, health, and hygiene.
- **Application:** Added multilingual support and user-friendly alerts to enhance tourist trust.

- **Research Done:** Investigated CCTV + geo-fencing dashboards for effective monitoring.
- **Application:** Built authority dashboard with heatmaps and real-time tracking (with consent).