

KARTIKEY MISHRA

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Professional Summary

Software Developer focused on bridging the gap between high-level application logic and system-level performance. Background in full-stack Next.js development with deep specialization in building React Native applications supported by custom Android native architecture. Experienced in designing in-house engines for location intelligence and biometric security to replace costly enterprise services and improve device battery life.

Work Experience

Software Developer, Octavision Software Solution July 2025 – Present

- Led development of VaamanHR, a production HR mobile suite managing shift scheduling, payroll, and field workforce operations.
- Developed a proprietary Kotlin native engine to handle core background processes and eliminate reliance on third-party tracking services, reducing licensing costs.
- Designed asymmetric-trust based location integrity logic to resolve GPS signal drift and maintain accurate attendance tracking in dense urban environments.
- Integrated on-device facial recognition using TensorFlow Lite with local embedding extraction and similarity matching for secure offline authentication.
- Built a motion-aware tracking engine using Google Activity Recognition to dynamically adjust GPS intervals and significantly improve battery performance.
- Orchestrated seamless data flow between the React Native frontend and Frappe/ERPNext backend, including a robust offline-first sync queue.

Freelance Web Developer | Full-Stack March 2025 – May 2025

- Deployed performance-focused web applications for small businesses using Next.js and TypeScript.
- Emphasized modular component design and clean state management for long-term scalability.

Skills & Technologies

Mobile Systems: React Native, Android Native Bridge (Kotlin/Java), Background Service Persistence, Hardware Sensor Integration (Motion/GPS), Edge AI (TensorFlow Lite)

Web & Full-stack: Next.js (Full-stack), React, TypeScript, Node.js, NestJS, REST API Design, TailwindCSS

ERP & Data: Frappe/ERPNext Integration, SQL (MySQL/PostgreSQL), NoSQL (MongoDB), NPM Package Publishing, Git Workflow

Projects

react-native-geo-activity-kit (v4.0.0) Open Source / NPM

Architected a high-performance native library for battery-optimized background tracking, featuring a built-in Native Notification System for generic app alerts and geofence-triggered messaging. Managed the transition from raw sensor processing to Google's Activity Recognition API, handling complex Android Foreground Service states and WakeLock logic.

Simhika: Astrology Platform simhika.in

Full-stack consultation platform featuring dynamic service flows and real-time form handling. Optimized for fast page loads and high user conversion. Built using Next.js, TypeScript, and TailwindCSS.

Education

Chhatrapati Sahuji Maharaj University, Kanpur, B.Tech. 2021 – 2025
in Computer Science

Interests

- Playing chess and cricket
- Practicing yoga and fitness for mental clarity
- Reading and thinking about AI, AGI, and how intelligent systems may shape the future