

Nikhil Verma

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TECHNICAL SKILLS

Languages: JavaScript(Node.js), Python, C++
Web/Backend: Node.js, Express.js, REST APIs, Redis, Nginx
Frontend: React.js, Next.js, HTML, CSS
Databases: PostgreSQL, MongoDB, Firebase Realtime DB, SQLite3
Tools/DevOps: Docker, Git, Cloudflare, Vercel

WORK EXPERIENCE

PerceptEye Inc. Jan 2026 – Jan 2026
SDE Intern (Remote) San Jose, CA, USA

- Designed and implemented an algorithm to generate 93 million unique, human-readable simulation names, eliminating manual input and improving AI training workflow traceability.
- Identified a security vulnerability caused by an unsecured Redis connection and implemented TLS-based secure communication between backend services, mitigating MITM risks.
- Fixed theme inconsistency and improved responsiveness by making dashboard components fully mobile-friendly.

Digimoga Re-innovations LLP Mar 2025 – Jul 2025
Fullstack Developer Intern (Hybrid) Greater Noida, UP, India

- Architected, developed, and deployed full-stack production platforms including learnocept.in (interactive learning) and rupeefunda.com (credit-card fintech) - serving 2K+ active users.
- Implemented secure **payment integrations** (Cashfree) with idempotent webhook handling and Redis-based background workers, reducing task latency by 40% and improving transaction reliability.
- Led frontend redevelopment after teammate offboarding - rebuilt responsive SPA dashboards, optimized routing, reduced bundle size by 25%, and achieved seamless backend API integration.

PROJECTS

LLM Confidence Calibration Benchmark 📄 | *Python, NLP, LLM Evaluation* Feb 2026 – Mar 2026

- Built a reproducible benchmarking pipeline to evaluate LLM confidence calibration across GSM8K, TruthfulQA, BoolQ, and CommonSenseQA.
- Measured model reliability using ECE, MCE, and Brier Score, exposing significant overconfidence gaps in modern open-source LLMs.
- Implemented semantic answer evaluation using sentence embeddings and analyzed model self-reported confidence (metacognition).

DineLine - Digital Queue Management Platform 📄 | *Next.js, ExpressJs, Prisma, RAG* Jul 2025 – Nov 2025

- Architected a secure, role-based backend (**Owner/Manager/Staff**) using JWT authentication, middleware authorization, and Prisma ORM to manage restaurants, queues, staff, and customer interactions.
- Built scalable REST APIs for real-time queue operations (token issuance, status transitions) with background jobs and cron-based workflows for alerts, confirmations, and no-shows.
- Organised a **Retrieval-Augmented Generation (RAG)** pipeline by generating embeddings for restaurant documents and menus, performing vector similarity search, and grounding WhatsApp and web chatbot responses with dynamic, context-aware data.

OPEN SOURCE CONTRIBUTIONS

@fixsrota/player

- Developed an open-source React Native and Expo library enabling distraction-free YouTube playback.
- It has 20+ organic weekly downloads, and is available on [NPM](https://www.npmjs.com/package/@fixsrota/player) 📄.

EDUCATION

Dr. A.P.J. Abdul Kalam Technical University UP, India
Bachelor of Technology in CSE (AI & ML) Expected June 2026

- Relevant Coursework: DSA, OS, DBMS, CN, System Design and OOPs with C++, Fundamentals of AI and ML.