Niraj Roy

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SUMMARY

Full Stack Developer and Computer Science & AI student who has built and shipped three real projects with TypeScript, React/Next.js, and Node.js, backed by MongoDB and REST APIs. Comfortable working independently, debugging systematically, and deploying to the cloud (MongoDB Atlas, Docker). Seeking a Full Stack Developer internship to contribute to production features and keep growing.

TECHNICAL SKILLS

- **Languages:** JavaScript, TypeScript, Python, SQL, Java, C, C++
- **Frontend:** React.js, Next.js, React Native (Expo), HTML5, CSS3, Tailwind CSS, Responsive Web Design
- **Backend:** Node.js, Express.js, Django, Django REST Framework (Basics), Socket.IO, Redis
- **Databases:** MongoDB (NoSQL), MySQL (SQL), PostgreSQL (Basics)
- **APIs & Security:** REST APIs, CRUD Operations, JWT Authentication, Role-Based Access Control, Zod validation
- **Cloud & DevOps:** MongoDB Atlas, Docker, Docker Compose, GitHub Actions (CI)
- **Tools & Testing:** Git, GitHub, Jest, Supertest, Postman, VS Code, npm, pip

PROJECTS

Delivery Agent Management System | GitHub

Next.js, TypeScript, Tailwind CSS, Node.js, Express.js, MongoDB, Redis, JWT, Zod, Docker, Jest

- Built RESTful APIs with Node.js, Express.js, TypeScript, and MongoDB (Mongoose) supporting CRUD, search, status/service-area filtering, pagination, and CSV export.
- Implemented JWT authentication and role-based access control with bcrypt password hashing; added Zod request validation and standardized error handling.
- Integrated Redis caching on agent list and detail APIs, with cache invalidation to keep data consistent with the database.
- Developed a responsive Next.js admin dashboard with analytics and activity timelines; wrote automated API tests with Jest and Supertest.
- Containerized the backend and Redis with Docker Compose for MongoDB Atlas cloud deployment.

Portal – Placement & Training Admin Dashboard | GitHub

React.js, Vite, Tailwind CSS

- Built a real-time admin analytics dashboard for a student placement and training portal, replacing mock data with live backend metrics across 8 KPI cards and 3 interactive charts.
- Designed and deployed serverless cloud functions for secure server-side data aggregation, admin-role verification, and CSV report export.
- Implemented batched bulk notification processing (500 records per batch) and 300ms debounced real-time filters.
- Optimized database indexes across students, jobs, and applications collections, achieving sub-2s load times.

Roxstar – Real-Time Voice & Multiplayer Mobile App | GitHub

React Native, Expo, TypeScript, Node.js, Express, MongoDB, Socket.IO, C++

- Built a full-stack mobile monorepo for real-time voice recording, audio effects, and multiplayer game rooms with server-synchronized live state.
- Developed a Node.js/Express/TypeScript backend with MongoDB for JWT authentication, REST APIs, and a server-authoritative multiplayer game engine over Socket.IO, including reconnection and state recovery.
- Engineered a native C++ audio module using Android's Oboe library for low-latency recording and echo effects, bridged into React Native.
- Containerized backend services with Docker Compose and set up CI with GitHub Actions.

EDUCATION

PW Institute of Innovation (PW IOI), Bengaluru, Karnataka — Computer Science & Artificial Intelligence | Expected Graduation: August 2028

Manipal University Jaipur, Rajasthan — Bachelor of Computer Applications (BCA) | Expected Graduation: August 2027

STRENGTHS

Independent problem solver • Asks questions early when blocked • Clear technical communication • Team collaboration • Quick learner • Time management

Languages: English, Hindi