Manupati Ramana Kumar

+91 7989476238 | manupatiramanakumar106@gmail.com | manupatiramanakumar | ramanakumar2580
ramanakumar-portfolio.vercel.app

Professional Summary

Full Stack Developer with strong hands-on experience in Next.js, NestJS, and AWS, specialized in building production-grade applications with offline capabilities and real-time features. Passionate about writing clean code, solving deployment challenges with Docker, and optimizing backend performance.

Technical Skills

- **Languages:** TypeScript, JavaScript, SQL, Python
- **Frontend:** Next.js, React.js, Tailwind CSS, Redux Toolkit
- **Backend:** Node.js, NestJS, REST APIs, WebSockets (Socket.io), JWT, RBAC
- **Databases:** PostgreSQL, Redis, IndexedDB, Dexie.js
- **Cloud & DevOps:** Docker, AWS (EC2, S3), Nginx, GitHub Actions (CI/CD)
- **Payments & Auth:** Razorpay, Stripe, NextAuth, Google OAuth

Experience

Full Stack Developer Intern — YEBSYS Coimbatore, Tamil Nadu
August 2024 – December 2024 (Remote)

- Implemented secure payment flows using Razorpay/UPI with backend webhook verification to handle transaction status updates.
- Fixed duplicate order issues by implementing idempotency keys, ensuring users weren't charged twice during network failures.
- Optimized high-traffic API endpoints by implementing Redis caching, significantly reducing database load and response times.
- Automated deployment workflows using GitHub Actions to push code to production servers via Docker.

Projects

TriaGen — Incident Management System
NestJS, AWS EC2, Redis, Docker

- Built a backend system to manage server outages and incidents, deployed on AWS EC2 with Nginx as a reverse proxy.
- Implemented real-time chat for Admin and Member roles using Socket.io (WebSockets) for instant coordination.
- Configured AWS S3 with Pre-signed URLs to handle file uploads directly from the client, reducing load on the backend server.
- Containerized the application using Docker to ensure consistent behavior across development and production environments.
- Secured sensitive endpoints using JWT-based authentication and Role-Based Access Control (RBAC) to restrict admin capabilities.

TaskGlyph — Offline-First Workspace
Next.js, PostgreSQL, IndexedDB

- Developed a task management application that functions completely offline using IndexedDB and Dexie.js.
- Built a background synchronization engine that pushes local changes to the PostgreSQL database once the device reconnects.
- Designed a conflict resolution strategy to handle data discrepancies between local storage and the server state.
- Decoupled the UI from network requests, resulting in instant interface updates regardless of internet speed.
- Enforced strict data validation using Zod schemas on both client and server to prevent corrupt data from breaking the sync process.

Rephrase AI — Multi-LLM Wrapper
Next.js, Node.js

- Integrated OpenAI, Gemini, and Hugging Face APIs to create a tool that summarizes large PDF documents.
- Built a text chunking pipeline to handle PDFs larger than token limits (up to 20MB) without crashing the server.
- Implemented an automated failover system: if one AI provider is down or rate-limited, the request automatically switches to another provider.
- Cached generated summaries in Redis to prevent redundant API calls for frequently accessed documents, reducing API costs.

Education

Dhanalakshmi Srinivasan University Tiruchirappalli, Tamil Nadu
B.Tech in Artificial Intelligence and Data Science | Nov 2021 – Jun 2025
CGPA: 7.69 / 10 | Led multiple academic projects as Team Lead.

Achievements

- Published research paper on *Quantum-Inspired Deep Learning for Financial Data* in IJARIIT (Vol. 11, Issue 3).
- Won Hack-O-Verse 2024 (70+ teams), secured $800 in seed funding for the project idea.
- Finished Runner-Up at AlgoBharat Hackathon; invited to Algorand Greenhouse Hack, Singapore.