Aditya Raj

Bangalore, India | +91-6203614200 | adityaraj11235@gmail.com | Portfolio | GitHub | LinkedIn

Technical Skills

Languages: Python, JavaScript, TypeScript, Java
AI / ML: RAG pipelines, LLM integration, generative AI, vector similarity search, HuggingFace, embeddings
Backend: FastAPI, Node.js, Express.js, Fastify, REST APIs, Microservices, Redis, Docker, AWS
Frontend: React.js, Next.js, HTML/CSS **Databases:** MongoDB, MySQL, SQLite3, SQLAlchemy, Vector Databases
DevOps & Tools: GitHub Actions, CI/CD, AWS CloudWatch, Git, Postman, k6, Jest, Playwright, Linux
AI-Assisted Development: Cursor, GitHub Copilot – rapid prototyping and code review

Experience

Software Development Engineer May 2026 – Present
Alt DRX *Bangalore, India (Onsite)*

- Built full-stack features on **Next.js** (SSR, **React Server Components**, **Server Actions**) and **Node.js/TypeScript** REST APIs, enforcing strict type contracts and consistent error handling end-to-end.
- Diagnosed and fixed a critical **React hydration bug**; optimized build/deploy pipeline, reducing CDN asset transfer to **2.5MB** and Next.js bundle transfer to **900KB**.
- Configured **∼20 AWS CloudWatch alarms** on resource consumption for deployment monitoring, cutting incident response time to minutes.
- Ran **VAPT** assessments and shipped security patches across **20+ APIs**, closing findings ahead of sign-off.
- Wrote unit and integration tests using **Jest** and end-to-end tests using **Playwright**, covering critical user flows across authentication, onboarding, and investment workflows.

Software Development Engineer Intern Jan 2026 – May 2026
GISUL Software Services Pvt. Ltd. *Bangalore, India (Onsite)*

- Owned the **DSA services layer** for **Aaptor**, a competency evaluation platform: a stateless, containerized code execution engine (**FastAPI + Docker**) with per-job CPU/memory/timeout isolation and a custom SQLite-backed query engine, and a Node.js question-generation service – each independently deployable behind an API gateway.
- Validated the execution engine across **50+ k6 load test runs**, sustaining end-to-end turnaround **under 5 seconds** across 10 concurrent sessions.
- Built a **RAG pipeline** grounding question generation in **2,000+ vectorized HuggingFace DSA problems** – **92%+ on-topic rate** across 200+ reviewed samples at **under 8s** latency, eliminating hallucinated test cases.
- Set up **CI/CD pipelines** via GitHub Actions (build, test, push to container registry on merge), maintaining **85%+ test coverage** on critical paths.

Software Development Engineer Intern Aug 2025 – Dec 2025
Cognifly AI System & Services *Jeddah, Saudi Arabia (Remote)*

- Built fullstack LMS features using **Next.js (SSR)** and **Node.js/Express** with **JWT authentication** and **RBAC** across student, instructor, and admin roles, working async with a remote international team.

Projects

DiffSense (GitHub)

- Built an **AST-driven** diff analysis & testing engine in **Python/FastAPI** using **Tree-sitter** and **Google Gemini**, extracting class signatures and mining sibling test suites to mirror repository idioms and eliminate mock hallucinations.
- Engineered an autonomous **self-healing agent loop** (`read_file`, `write_file`, `run_command`) that dynamically executes generated tests, analyzes terminal exit codes/stack traces, and iterates on fixes within a budgeted turn limit until suites pass.
- Implemented **diff-scoped impact execution** & **Git-native caching** evaluated across **50+ PRs** (1–1,000 LoC), slashing full-suite test overhead and caching verified test suites and PRD artifacts directly to isolated dedicated test branches.

Research Publication

Design and Evaluation of a Real-Time Web Chat System with End-to-End Security, Published in **NCASET 2025** | ISBN: 978-93-49421-36-3

Education

Visvesvaraya Technological University Bangalore, India
B.E in Computer Science | ***CGPA: 7.8 / 10*** *2022 – 2026*

Certifications

Meta Database Engineer Specialization, Meta | Docker Foundations Professional Certificate, Docker | Career Essentials in Cybersecurity, Microsoft & LinkedIn | RESTful API Developer, LinkedIn | 150+ DSA problems solved (LeetCode)