

AAYANSH YADAV

+91-9305262603 aayanshyadav@proton.me



[LinkedIn](#)



[GitHub](#)



[LeetCode](#)



[Codeforces](#)

Education

Indian Institute of Technology, Madras

BS, Data Science and Applications | **CGPA: 9.03 / 10**

2023 – 2027 (Expected)

Chennai, India

- **Relevant Coursework:** Data Structures & Algorithms, DBMS, Operating Systems, Computer Networks, Object-Oriented Programming, Machine Learning, Deep Learning, Statistics, Mathematics.

Experience

Software Engineer Intern

Straive

Aug 2025 – Oct 2025

Chennai, India

- Built **CyberDetect**, a client-side log-analysis tool with 8 threat-detection heuristics (SQLi, path traversal, brute-force) and a multi-provider LLM layer for dynamic rule generation; adopted by 5 internal teams for pre-audit log triage.
- Built a Spring Boot microservice to aggregate client telemetry, processing 800 requests/min.
- Containerized a FastAPI threat-detection backend and Redis cache via Docker on AWS EC2, cutting repeated threat-evaluation latency from 240 ms to 45 ms.

Software Developer Intern

Annam.AI

May 2025 – Jul 2025

Remote, India

- Cut proximity-search latency from 350 ms to 70 ms (5×) via Uber H3 geospatial indexing for 1–10 km radius queries.
- Engineered a FastAPI backend across 5 domains (auth, job board, chat, rentals, profile); held p95 < 200 ms at 500+ concurrent users under Locust load.
- Secured stateless sessions and rate-limited OTP verification using Redis and JWT.

Projects

LedgerPay: High-Concurrency Payment Engine

Java 21, Spring Boot, Spring Security, Spring Data JPA, PostgreSQL, Docker

May 2026 – Jun 2026

[GitHub](#)

- Stress-tested with Testcontainers (real PostgreSQL): 1,000 concurrent withdrawals on a single account settled exactly 10 and rejected 990 with zero overselling; sustained 710 TPS across 5,000 concurrent transfers under worst-case single-row contention, with no lost updates or deadlocks.
- Engineered a deadlock-safe transfer engine using PostgreSQL pessimistic row-locking with deterministic lock-ordering, enforcing double-entry, balance-conserving ledger semantics.
- Guaranteed exactly-once transfers via database-enforced idempotency keys (unique constraint, insert-first), eliminating double-spend on client retries.

WorkZone - Multi-Tenant HR Management Platform

FastAPI, PostgreSQL, Caddy, GCP, JWT, Cloudflare, Gemini API

Oct 2025 – Dec 2025

[GitHub](#)

- Architected schema-isolated multi-tenant backend with dedicated PostgreSQL schemas per tenant across 50+ production APIs; enforced strict data sovereignty and platform-tenant separation.
- Designed RBAC model supporting employee, manager, recruiter, and admin hierarchies with cross-tenant safeguards; integrated Gemini for resume scoring, AI-led interview evaluation, and policy assistance.
- Built subdomain routing via Caddy reverse proxy + Cloudflare DNS with automated SSL provisioning for tenant custom domains on GCP; implemented tenant-aware connection pooling.

Achievements

- **Competitive Programming:** Solved 700+ Data Structures & Algorithms problems across LeetCode and Codeforces; earned the LeetCode Knight badge at 1893 rating, with a peak contest rank of 455 (top 1.2%).
- **System Threat Forecaster (IITM MLP):** Ranked 1 of 1,700+ for malware prediction on 100K-row telemetry via a tuned LightGBM + XGBoost ensemble.

Technical Skills

- **Languages:** Java, Python, SQL, JavaScript, Bash
- **Backend:** Spring Boot, Spring Security, Spring Data JPA, FastAPI, Flask, Celery, REST APIs
- **Databases & Caching:** PostgreSQL, MongoDB, Redis
- **Testing:** JUnit 5, Testcontainers, pytest, Locust
- **Infrastructure & Cloud:** Docker, AWS, GCP, Linux, Git, CI/CD, Nginx, Caddy, Cloudflare