

VYANKATESH RAMPRASAD SABU

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Backend intern building production multi-tenant systems, event-driven pipelines, and LLM-integrated backends. Available onsite in Bengaluru.

EDUCATION

Indian Institute of Information Technology, Nagpur

Expected June 2027

B.Tech in Computer Science and Engineering (HCI & Gaming Technology) — CGPA: 8.55/10 | No Backlogs

EXPERIENCE

APAN INFOTECH PROCESS (OPC) PVT LTD — Backend Developer Intern

May 2026 – Present

Java, Spring Boot, PostgreSQL, Redis, Docker

Remote

- **Own backend features and database schema design end-to-end** for Fleetcore, a multi-tenant fleet management platform serving isolated tenant stacks in production.
- Eliminated N+1 query patterns across core list endpoints via **batch loading**, collapsing per-request queries from N+1 to 2 and cutting endpoint response latency.
- Hardened shared infrastructure for **burst load** with Redis-based leaky-bucket rate limiting and tuned HikariCP connection pools, protecting tenant stacks under traffic spikes.
- Designed and shipped a **blue-green zero-downtime deployment pipeline** (Docker Compose profiles, Traefik routing, graceful shutdown), removing release-window outages for live tenants.
- Instrumented services with **Micrometer, Prometheus, and Grafana** — percentile-histogram latency metrics and dashboards that surface performance regressions before release.
- Introduced **Flyway versioned migrations** with startup validation; designed an audit-safe financial module enforcing DB-layer integrity via immutability triggers, CHECK constraints, and RBAC.
- Wrote JUnit 5 + Mockito unit tests and Testcontainers integration tests across service/repository layers, catching regressions in CI.

Navionyx Mobility Solutions Pvt. Ltd. — SWE Intern (Android)

Aug 2025 – Sep 2025

Kotlin, Android

Chh. Sambhaji Nagar, Maharashtra

- Reduced application **cold-start time by 86%** through architecture refactoring and performance profiling of the startup path.
- Integrated a Retrofit-based API layer and refactored WebView caching, cutting page-load delays ~40%; shipped push notifications with Text-to-Speech alerts.

PROJECTS

SafeMail — Real-Time Email Ingestion & Classification Pipeline | [GitHub](#)

Oct 2025

Java, Spring Boot, Gmail Watch API, OAuth 2.0, AES-GCM, Docker

- Engineered an **event-driven pipeline** streaming real-time mailbox events via the Gmail Watch API to trigger phishing/spam classification and an automated quarantine workflow.
- Secured mailbox access with OAuth 2.0 and AES-GCM encrypted refresh-token persistence — no plaintext credentials.

AI Diet-Chart Engine — LLM + Deterministic Compute Backend (Client Project)

Jun 2026 – Jul 2026

Spring Boot, PostgreSQL + pgvector, LLM APIs

- Built a diet-generation backend for a nephrology hospital where the **LLM selects only ingredients/quantities as structured output**; nutrition macros are computed deterministically from IFCT 2017 / USDA FDC datasets — a $\pm 7\%$ validation gate rejects hallucinated model outputs.
- Resolved free-text food names to canonical database entities using **pgvector cosine-similarity embedding search**.

AI Finance Reconciliation Agent — Hackathon Build

Aug 2026

- Built an agent performing **4-way reconciliation** (orders, gateway report, bank statement, GL ledger) over 50+ record batches — deterministic matching tiers first, LLM as Tier-3 adjudicator for exceptions, plus a natural-language Q&A layer over results.

Homigo — Urban Service Marketplace (Full Stack) | [GitHub](#)

Apr 2026 – Present

- Kotlin, Spring Boot, MongoDB, Redis — 28+ production-ready features across three isolated user roles; JWT multi-role access control, Redis caching on hot read paths, Razorpay payments, reactive MVVM Android client.

DBSync — PostgreSQL Schema Diff CLI

Sep 2025

- Built a Node.js CLI that diffs PostgreSQL schemas across environments over SSH tunnels and generates directional sync plans, removing manual schema reconciliation.

TECHNICAL SKILLS

Languages: Java, C/C++, Kotlin, SQL, JavaScript, Python

Backend & Distributed Systems: Spring Boot, REST APIs, JWT, Node.js, multi-tenant design, event-driven pipelines, rate limiting, zero-downtime deployment

AI Integration: LLM APIs, structured/JSON-constrained outputs, deterministic validation of model outputs, pgvector embeddings & semantic search

Observability & Quality: Prometheus, Grafana, Micrometer, Loki, percentile/latency metrics; JUnit 5, Mockito, Testcontainers, CI coverage

Databases: PostgreSQL (indexing, triggers, Flyway migrations, pgvector), MySQL, MongoDB, Redis, SQLite

Infrastructure & Tools: Docker, Linux, Git/GitHub, CI/CD (GitHub Actions), Traefik, AWS EC2, Maven, Gradle

ACHIEVEMENTS

- **Smart India Hackathon 2025:** Top 5 nationally out of 500+ shortlisted teams in India's premier government-backed hackathon.
- **IIT BHU National Hackathon:** Podium finish competing against teams from top engineering institutes.
- **Competitive Programming:** 2-Star on CodeChef (max 1500); 300+ DSA problems across LeetCode, CodeChef, GeeksforGeeks.
- **Guest Instructor, IIIT Nagpur:** Invited to deliver a hands-on App Development session to peers.