

KSHITIJ MIDHA

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EDUCATION

Vellore Institute of Technology

Bachelor of Technology - Computer Science and Engineering - **CGPA - 8.36**

2021 – 2025

Vellore, Tamil Nadu

EXPERIENCE

Infosys

Sep 2025 – Present

Systems Engineer

India

- Diagnosed and resolved root-cause failures in distributed enterprise wealth-management systems, tracing defects across **application and API layers** spanning multiple integrated platforms.
- Resolved data-consistency and workflow-state issues across financial systems by analyzing account mappings, dependency chains, report-generation pipelines, and Databricks data workflows.
- Debugged third-party financial integrations by tracing failures through **API** contracts and data pipelines, then implementing and validating fixes.
- Used **Databricks** and internal monitoring tooling to debug high-throughput financial data pipelines, isolating and resolving defects in synchronization, entitlement, and reporting workflows.
- Built hands-on proficiency in **Java, Spring Boot, React**, and **REST API** design while contributing to enterprise application development for the platform.

PROJECTS

why [GitHub](#) | [Live Demo](#)

Java, Spring Boot, React, TypeScript, Node.js, Docker, Groq/LLM

- Built an AI-assisted shell-command explainer that parses git/docker commands into a structured breakdown of flags, arguments, and effects using a hand-authored knowledge base, before an **LLM** is ever invoked – preventing hallucinated explanations of destructive flags.
- Designed a verified/inferred confidence system distinguishing knowledge-base-matched commands from **LLM (Groq)** best-effort guesses; explanation prompts are built strictly from parsed structured fields rather than raw input.
- Hardened the **Spring Boot REST API** with per-IP rate limiting (10 req/min), a 500-character input cap, global JSON error handling, and graceful fallback caching for LLM outages; shipped with 41+ passing tests, a **TypeScript/Node.js** CLI, a **React** frontend, and a **Dockerized** deployment on Render/Vercel.

HookForge [GitHub](#)

Java, Spring Boot, Amazon SQS, AWS, HMAC/Webhooks

- Built an asynchronous webhook delivery service in **Java/Spring Boot** where the API persists incoming events and enqueues lightweight delivery jobs to **Amazon SQS**, decoupling ingestion from delivery and returning to producers immediately.
- Designed delivery as a single HTTP attempt per worker invocation, deferring all retry logic to **SQS** visibility-timeout redelivery (maxReceiveCount=3) with automatic dead-letter-queue routing on repeated failure.
- Implemented per-endpoint **HMAC-SHA256** signing with one-time secret disclosure and baseline **SSRF** protections; verified the design with live **AWS** tests covering successful delivery, forced failures, 3 redeliveries, and DLQ failover without retry flooding.

pdfctl [GitHub](#)

Java 21, Apache PDFBox, picocli, Gradle

- Built a **Java 21** CLI toolkit (**Apache PDFBox, picocli**) with six subcommands (info, merge, split, delete, rotate, extract-text), supporting 1-indexed page-range syntax (e.g. 2,4-6,10-) and password-protected PDFs.
- Designed a layered architecture – CLI → UseCase (validation, atomic writes) → a PdfBoxService interface – with a single explicit composition root wiring implementations, keeping PDFBox usage isolated behind an interface.
- Implemented atomic file writes and a defined exit-code taxonomy for validation, I/O conflicts, corrupt PDFs, and encrypted/password failures; documented importPage merge/split trade-offs and backed the design with 165 tests using generated PDF fixtures.

TECHNICAL SKILLS

Languages: Java, Python, JavaScript/TypeScript, SQL

Backend: Spring Boot, REST APIs, Node.js

Frontend: React, TypeScript, Vite

Cloud (AWS): EC2, S3, SQS, IAM – Certified Cloud Practitioner & Solutions Architect Associate

AI/LLM: LLM API integration (Groq), prompt design, confidence-aware fallback design

Tools: Docker, Git/GitHub, JUnit, Mockito, Maven, npm

CERTIFICATIONS

 AWS Certified Cloud Practitioner

 AWS Certified Solutions Architect – Associate