Mukesh Thatikonda

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Software engineer building backend, full-stack, and AI systems in Java and Python

Summary

Software engineer with over a year at Cognizant supporting and improving financial applications in production for a US retail client. Builds and deploys Java and Python backends, full-stack web applications, and AI assistants, with automated testing and infrastructure on AWS. AWS Certified Cloud Practitioner and AI Practitioner; available to join immediately.

Experience

Cognizant - Jr Software Engineer (Full-time) **Jul 2025 - Aug 2026**

- Resolved **100+ production incidents** and approximately **50 work requests** across **5 financial applications** for a US retail client, managed in ServiceNow, meeting SLA targets on nearly all assigned work.
- Supported Spring Boot microservices, a Java EE monolith on JBoss, and ASP.NET applications with React frontends, on Oracle Database, SQL Server, and MongoDB across Linux and Windows servers and GCP.
- Monitored batch jobs, data flows, and alerts; ran post-release checks and reconciliation; and worked recurring incidents through problem management with development teams, using GitLab, Jenkins, Postman, Jira, and Confluence.
- Diagnosed a failed weekly batch as a file server's move from SMB1 to SMB2, arranged a temporary compatibility setting with the Windows team, and wrote the **SMB2** code change in the Java application that the development team deployed.
- Traced recurring SQL Server load failures to duplicate upstream records; corrected the data with SQL, then worked with a developer to fix the grouping logic so later loads ran cleanly.
- Built a **PowerShell log analyzer** that correlates multi-file logs by request and transaction IDs and exports summaries to CSV/Excel, cutting a 30–60 minute investigation to **a few minutes**.

Cognizant - Intern **Mar 2025 - Jun 2025**

- Helped build a team **ASP.NET Core MVC** application with MySQL in Docker after structured C#/.NET training, working in an Agile team with Git and CI/CD.

Projects

Teamora | Demo | *Python, FastAPI, LangGraph, PostgreSQL, React, K3s, AWS* **Oct 2026 - Present**

- Built a real-time collaborative workspace for documents, spreadsheets, slides, whiteboards, tasks, calendar, chat, and meetings as **5 Python microservices** with a React frontend.
- Centralized access checks in one **gRPC** permission service that fails closed on timeouts; added Google OIDC sign-in with PKCE and rotating sessions, acknowledged Yjs saves with IndexedDB recovery, and a transactional outbox feeding RabbitMQ/Celery jobs.
- Built an AI assistant on permission-filtered hybrid search (**pgvector** and full-text) that checks each sentence's cited workspace quotes before replying and pauses **LangGraph** actions for user approval; its tools are also exposed over MCP.
- Deployed it on a K3s cluster on AWS defined in **Terraform**, with a Go **Kubernetes operator** that scales each app's EC2 workers from zero and GitHub Actions releases through ECR and SSM using OIDC; tested rollback, rebuilds, and worker loss.
- Tested with **171 Python tests** on real Postgres, end-to-end browser flows, and a 55-case assistant evaluation set.

UniNeeds Backend | *Java, Spring Boot, PostgreSQL, Kafka, Redis, Docker* **Oct 2026 - Present**

- Built and deployed the backend for UniNeeds, a college services app (mobile app and admin by a teammate): a **Spring Boot** API gateway and **7 services** for identity, food ordering, payments, rentals, the campus store, chat, and notifications, serving the app's live traffic.
- Gave each service its own Postgres schema and database role, delivered events through a **transactional outbox** on **Kafka** with read models instead of cross-service queries, and integrated Firebase, Razorpay, and SMTP.
- Kept the HTTP and Socket.IO contracts the app depends on, checked by contract tests, with integration tests on real Postgres and Kafka (Testcontainers); packaged with Docker and Helm, with Prometheus and Grafana monitoring.

Track Your Attendance | *Next.js, TypeScript, MongoDB, OCR* **Aug 2024 - Sep 2024**

- Built and deployed an attendance and timetable web app used by **3,000+ students** at SRM University-AP, over a third of the university.
- Signs in to the university portal (captcha read by a separate OCR service), caches timetables and attendance in MongoDB, and shows live class countdowns, allowable skips, and classes needed to reach 75%, adjusted for holidays.

patrn.ink | Demo | *Java 25, Spring Boot 4, Spring Modulith, DynamoDB, SQS, Next.js* **Feb 2026 - Present**

- Built a link shortener as a **Java 25** / **Spring Boot 4** modular monolith with module boundaries enforced by architecture tests, and a Next.js dashboard.
- Made redirects verifiable: each destination change is appended to a **Merkle transparency log** in the same DynamoDB transaction, with Ed25519-signed tree heads and proofs checked in the browser.
- Buffered click analytics through **SQS** into daily rollups with no IP addresses stored, cached redirects with Caffeine and Redis, and sent all user-URL fetches through one SSRF-guarded GraalVM native service.
- Release CI runs **122 JUnit** and 15 Playwright tests, accessibility and Lighthouse budgets, an OWASP ZAP baseline, and Trivy scans.

Mei | Demo | *TypeScript, Python, GNOME Shell, SQLite* **Jun 2026 - Present**

- Built an AI assistant for the GNOME desktop: a GNOME Shell extension backed by a Python service (systemd, SQLite, D-Bus) that works with local and cloud models (Ollama, llama.cpp, OpenAI, Anthropic, Gemini) through one provider interface.
- Lets the assistant manage files, apps, windows, settings, sandboxed commands, and accessibility-based computer use only with the user's approval, enforced by a policy outside the model; about **600 automated tests** plus end-to-end runs in a nested GNOME Shell session.

Little-Later | Demo | *TypeScript, React, IndexedDB, Web Crypto* **Oct 2025 - Present**

- Built a local-first Chrome extension for visual bookmarks, tasks, reminders, and notes, with AES-GCM profile locking, password-protected backups, and LLM tool calls that need user confirmation.

Skills

Languages: Java, Python, TypeScript, JavaScript, SQL, Go, Bash, PowerShell, C++

Backend & Frontend: Spring Boot, Spring Modulith, Java EE, JPA/Hibernate, FastAPI, Node.js, ASP.NET Core MVC, REST, gRPC, WebSockets, Microservices, React, Next.js

Data & Messaging: PostgreSQL, Oracle Database, Microsoft SQL Server, MongoDB, DynamoDB, Redis, SQLite, Flyway, Kafka, RabbitMQ, Celery

Cloud & DevOps: AWS (EC2, Lambda, API Gateway, S3, ECR, SSM, IAM, SQS), Terraform, Docker, Kubernetes (K3s, Helm, Operators), Cloudflare, GCP, GitHub Actions, Jenkins, GitLab, Linux

AI Engineering: LLM APIs, RAG, pgvector, LangGraph, LangChain, MCP, Tool Calling, Human-in-the-Loop Agents, LLM Evaluation, LiveKit

Testing & Security: JUnit, Testcontainers, WireMock, pytest, Vitest, Playwright, OWASP ZAP, Trivy, OAuth 2.0, OIDC, JWT

Operations: ServiceNow, Jira, Confluence, Dynatrace, Prometheus, Grafana, Incident & Problem Management, Root-Cause Analysis, Release & Change Management

Certifications

AWS Certified Cloud Practitioner (CLF-C02) **Oct 2026**
AWS Certified AI Practitioner (AIF-C01) **Sep 2026**

Achievements

Competitive Programming: Solved problems in Python, Java, and C++, reaching a peak rating of **1,793 on LeetCode (top 10%)** and **1,607 on CodeChef (3-star)**.

Education

SRM University, Andhra Pradesh **Sep 2021 - May 2025**
B.Tech, Computer Science and Engineering | CGPA: **8.19/10**
Coursework: Data Structures & Algorithms, Operating Systems, Databases, Computer Networks, AI/ML