Manoj Reddy Ponagandla

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Summary

Software Engineer 3 with 5+ years of experience designing and operating cloud-native microservices and distributed systems using Java, Spring Boot, and AWS. Currently modernizing large-scale production services at Charter Communications, leading API design, performance optimization, and reliability improvements across enterprise platforms. Proven ability to build scalable backend architectures, mentor engineers, and drive end-to-end delivery in Agile environments.

Skills

Languages	Java, TypeScript, JavaScript, Python, SQL
Backend & Architecture	Spring Boot, RESTful APIs, Microservices, Distributed Systems, Event-Driven Architecture, GraphQL
Cloud & DevOps	AWS (S3, AppRunner, CloudWatch), Kubernetes, Docker, Jenkins, GitHub Actions, CI/CD, Infrastructure Automation
Databases	PostgreSQL, MySQL, MongoDB, Firebase RTDB, Relational & NoSQL Data Modeling
Messaging & Integration	Apache Kafka, Asynchronous Processing, Service-to-Service Communication
Testing & Quality	JUnit 5, Mockito, Mocha, Jest, Automated Testing, Code Reviews
Tools	Git, IntelliJ IDEA, VS Code, Maven, Agile/Scrum

Experience

Charter Communications (Spectrum) *July 2021 – Present*

Software Engineer 3 — Java, Spring Boot, AWS *St. Louis, MO*

- Designed and maintained high-availability microservices using Java 17 and Spring Boot 3.x supporting large-scale production workflows.
- Modernized legacy Java 8/Jersey systems to Spring Boot, improving reliability, maintainability, and deployment consistency.
- Built and optimized RESTful and GraphQL APIs enabling seamless integration across distributed enterprise services.
- Implemented event-driven workflows using Apache Kafka to enhance system resilience and asynchronous processing.
- Led root-cause analysis and production debugging efforts in Kubernetes environments, reducing incident resolution time.
- Mentored junior engineers through code reviews and design discussions, promoting clean architecture and best practices.
- Collaborated with cross-functional teams to define requirements, plan releases, and ensure alignment with enterprise architecture standards.

Projects

DesiRoomy

- Built a full-stack roommate-matching platform using Next.js and Supabase (PostgreSQL), designing scalable API-driven backend services.
- Implemented secure authentication, real-time data workflows, and automated CI/CD pipelines to support reliable cloud deployments.
- Designed database schemas and service layers optimized for performance and data integrity.

Business & Operators Platform

- Developed a two-sided platform using Next.js and backend APIs to connect business owners with operators.
- Architected REST services and data models enabling secure messaging, search, and role-based workflows.
- Designed modular service components to support future scalability and feature expansion.

Barely Complicated Tools Suite

- Created cloud-hosted tools using FastAPI and React, containerized with Docker and deployed on AWS AppRunner.
- Built REST APIs and automation scripts to streamline everyday workflows with scalable backend services.

Education

University of Missouri–St. Louis *Dec 2020*

M.S. in Computer Science (Artificial Intelligence)

Artificial Intelligence Graduate Certificate

Anurag Group of Institutions, Hyderabad, India *May 2018*

B.Tech. in Computer Science and Engineering

Certifications

Artificial Intelligence Graduate Certificate — University of Missouri–St. Louis

Machine Learning Certificate — eCornell, Cornell University (2024)

MedCerts Cybersecurity Analyst (CySA+) — Vulnerability Management & Threat Detection

Achievements

Judge — LA Hacks 2025, University of California, Los Angeles

Judge — MHacks 2025, University of Michigan, Ann Arbor