Saichand Vemuri

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SUMMARY

Software Engineer specializing in healthcare technology transformation. Experienced in building AI-powered 'Digital Scribe' agents using OpenAI and migrating legacy paper-based workflows into automated, Kafka-driven data pipelines. Expert in the full SDLC, from Spring Boot/Oracle DB backend engineering to modernizing frontend modules in Angular and React, with a focus on high-security, EKS-deployed cloud solutions.

SKILLS

- **Languages:** Java (v8+), TypeScript, JavaScript, SQL, HTML5/CSS3.
- **Backend Frameworks:** Spring Boot, Spring MVC, Spring Servlets, Hibernate/JPA.
- **Frontend Frameworks:** Angular (v2+), React, Next.js, Redux, RxJS.
- **Data & Messaging:** Oracle DB, PostgreSQL, Apache Kafka, Redis.
- **Cloud & DevOps:** AWS (EKS, ECR, S3, CloudWatch), Azure, Docker, Kubernetes, Jenkins, Maven/Gradle.
- **Testing & Tools:** JUnit, Jest, Mockito, Swagger/OpenAPI, Git, Jira, Confluence.
- **AI/ML:** OpenAI API, Agentic Workflow Design, Prompt Engineering.

PROFESSIONAL EXPERIENCE

Software Engineer, CVS Health, USA **September 2023 – Present**

- Orchestrated a sophisticated **Agentic Workflow** using **OpenAI APIs** to act as a Digital Scribe. Engineered logic to monitor clinician-patient dialogue and programmatically populate medical records, transforming unstructured conversation into structured data and significantly reducing physician administrative overhead.
- Spearheaded the migration of legacy immunization and medication modules into a modern **React** environment. Managed a **Unified Codebase (Modular Monolith)**, utilizing in-house libraries to convert static UX skeletons into high-performance, interactive applications.
- Architected high-availability microservices using **Java/Spring Boot** and **PostgreSQL**. Applied **CAP Theorem** principles to balance data consistency and availability, utilizing **Apache Kafka** for event streaming and **Redis** for low-latency caching of critical patient history.
- Streamlined the delivery lifecycle by building **Jenkins** pipelines to automate the creation of **Docker** images. Managed deployment into **Kubernetes** clusters on **Azure**, ensuring 24/7 system uptime and seamless scaling of healthcare modules.
- Established a culture of excellence by achieving **94% JUnit** and **90% Jest** test coverage. Operated within an **Agile** framework, leveraging **Jira** for sprint execution and **Azure GitHub** for version control and cross-departmental collaboration.
- Experienced in modern AI-assisted coding tools including **Cursor**, **Claude**, **OpenAI, Co-pilot.**
- Collaborated with **cross-functional** teams, including Product Managers and Healthcare SMEs, to translate complex clinical requirements into technical specifications. Actively participated in peer code reviews and knowledge-sharing sessions to maintain high engineering standards and ensure seamless integration across departmental modules.

Associate Software Engineer, Ahex Technologies, USA **January 2020 – May 2023**

- Led the end-to-end migration of a legacy **Spring Servlet** monolith into **Spring Boot Microservices**. Improved system modularity and **reduced deployment cycles by 50%** by enabling independent service scaling.
- Orchestrated the architectural shift from legacy, IE-dependent JSP pages to an **Angular** SPA. Utilized **RxJS** and **TypeScript** to ensure type-safety and UI responsiveness, overcoming Internet Explorer deprecation challenges.
- Engineered an automated pipeline using **Spring Scheduler** and **Apache Kafka** to scrape hospital records. Implemented **Dead Letter Queues** for fault tolerance, automating 80% of manual entry for paper prescriptions with encrypted **AWS S3 storage**.
- Architected a dynamic scheduling algorithm for caregiver assignments. Utilized **Redis** for low-latency caching of availability data, reducing the primary **Oracle DB** load and enabling real-time logistical updates for 1,000+ daily patient visits.
- Managed containerization via **Docker** and **AWS ECR**, deploying to **AWS EKS** through **Jenkins** CI/CD. Monitored health and logs via **AWS CloudWatch** to identify and resolve performance bottlenecks.
- Secured patient data using **JWT-**based authentication and maintained **94% JUnit** coverage to ensure 100% logic parity during the transition of sensitive medical records in **Oracle DB**.

PERSONAL PROJECT

Conversational Law Enforcement Agent (AWS Bedrock)

- Developed a multi-agent system on **AWS Bedrock** featuring a lead orchestrator and **6 specialized child agents**. Built logic to chain agent responses, allowing the system to gather context from one service (e.g., driver ID) to automatically trigger follow-up queries in others.
- Connected agents to a diverse backend ecosystem including **Java Spring Boot services**, **SQL databases**, and **AWS Lambda**. Integrated a mix of **REST, SOAP, and GraphQL APIs**, demonstrating the ability to pull real-time transport data from both legacy and modern sources.
- Authored complex system instructions and implemented **Memory Management** to maintain context over long conversations. Integrated **AWS Bedrock Knowledge Bases** for RAG (Retrieval-Augmented Generation) and configured **Guardrails** to ensure responses remained compliant with law enforcement protocols.

EDUCATION

- Master of Science in Computer Science — University of Central Missouri, USA
- Bachelor of Technology in Computer Science and Engineering — JNTUH

CORE COMPETENCIES

- **System Design:** Monolith to Microservices, Event-Driven Architecture, API First Design.
- **Security:** HIPAA Compliance awareness, JWT/OAuth2/LDAP, Data Encryption at Rest/Transit.
- **Agile:** Scrum/Kanban, Mentorship, Sprint Planning, Jira/Confluence.