SAI GANESH VARMA SIRUVURI

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PROFESSIONAL SUMMARY

Software Developer with over 7 years of experience designing, building, and deploying **scalable**, **secure**, and **high-performance web applications** across banking, manufacturing, logistics, and lending platforms. Proficient in **Java 11+**, **Spring Boot**, **Microservices**, and **React.js** with a strong foundation in **RESTful API** design, **modular UI architecture**, and real-time data processing using **Kafka** and **WebSockets**. Demonstrated expertise in **CI/CD automation**, containerization with **Docker**, and **cloud deployments** using **AWS** services such as **EC2**, **S3**, **RDS**, and **IAM**. Proven track record of improving performance, reducing system latency, and enabling business-critical automation using **Redis**, **PostgreSQL**, **MongoDB**, and security frameworks like **Spring Security** and **JWT**. Adept in **Agile environments**, delivering production-ready code across the full **SDLC** with a seamless integration between frontend and backend services. Currently driving cloud-native development initiatives using **GitHub Actions**, **Jenkins**, and **Terraform** to support enterprise-grade applications in regulated and distributed environments.

TECHNICAL SKILLS

Programming Languages: Java (11+), JavaScript (ES6+), TypeScript, SQL, Python
Frameworks & Libraries: Spring Boot, Spring Security, Spring MVC, Hibernate, JPA, React.js, Redux Toolkit, Node.js, Express.js, Next.js
Frontend & UI Development: HTML5, CSS3, SCSS, Bootstrap, Material UI, Tailwind CSS, AJAX, JSON
Backend & API Development: RESTful APIs, GraphQL, JWT, OAuth2, WebSockets
Databases & Caching: MySQL, PostgreSQL, MongoDB, Redis, DynamoDB
Cloud & DevOps: AWS (EC2, S3, RDS, Lambda, CloudWatch, IAM), Docker, Kubernetes, GitHub Actions, Jenkins, GitLab CI/CD, Terraform
Build & Automation Tools: Maven, Gradle, Docker Compose, Nexus, SonarQube
Testing & Quality: JUnit, Mockito, TestNG, Selenium, REST Assured, Postman, Jacoco
Monitoring & Logging: ELK Stack (Elasticsearch, Logstash, Kibana), Prometheus, Grafana, Log4j, SLF4J
Version Control & Collaboration: Git, GitHub, GitLab, Bitbucket, JIRA, Confluence
Methodologies & Tools: Agile (Scrum, Kanban), IntelliJ IDEA, VS Code, Swagger/OpenAPI, Figma, Notion
Messaging & Streaming: Apache Kafka, RabbitMQ

PROFESSIONAL EXPERIENCE

Senior Software Developer   **Feb 2024 - Present**
Encore | **Illinois**

Project Description: Developed a real-time factory floor and quality inspection management platform to replace paper-based reporting, streamline production defect tracking, and monitor sensor-triggered maintenance events. Leveraged Spring Boot microservices and a React.js frontend hosted on AWS, with Kafka-based real-time machine telemetry and WebSocket-based UI updates.

Frontend

- Built an interactive production dashboard using **React.js**, **Redux Toolkit** and **Tailwind CSS**, enabling plant supervisors to monitor defect rates and production KPIs in real time.
- Integrated dynamic state management with **React Hooks**, **Formik**, and **Yup** to validate QA data at the point of entry, improving inspection accuracy and cutting error rates.
- Implemented **React Router** for seamless multi-page navigation and **WebSocket**-based UI updates, ensuring smooth transitions between sensor alerts, machine stats, and operator logs.
- Optimized component structure and UI rendering with Tailwind CSS and lazy loading, improving page load time and responsiveness on low-powered factory floor devices.
- Applied modular component architecture in **React.js** for reusability and maintainability, simplifying future enhancements across QA and reporting features.

Backend

- Developed modular REST APIs using **Spring Boot** and **Java 11** to enable data exchange between QA terminals, ERP systems, and production dashboards, removing dependency on Excel-based logs.
- Automated real-time sensor tracking using **Kafka** producers and integrated **Spring WebSocket** endpoints to broadcast alerts, decreasing machine incident response time.
- Implemented secure backend authentication using **Spring Security**, **JWT**, and **RBAC**, reducing unauthorized access incidents and tightening data access governance.
- Tuned **PostgreSQL** database queries and applied connection pooling via **HikariCP**, improving API throughput and reducing response times during shift transitions.
- Authored comprehensive unit and integration test suites with **JUnit**, **Mockito**, and **Testcontainers,** achieving code coverage and reducing post-release bugs by nearly one-third.

Cloud

- Containerized backend microservices and frontend components using **Docker**, deploying consistently to **AWS EC2** instances with **Elastic Beanstalk**, ensuring scalable multi-environment availability.
- Automated CI/CD pipelines with **GitLab CI** and **Jenkins** to manage builds, tests, and deployments across dev, QA, and production, accelerating deployment cycles.
- Implemented access control via AWS IAM policies for EC2 and S3 resources, securing logs, reports, and deployment scripts across teams.
- Set up **AWS CloudWatch** and **ELK Stack** monitoring to visualize service performance and error logs, reducing incident resolution time with real-time observability tools.

Software Developer   **Jun 2021 - Aug 2023**
EVCO Plastics | Wisconsin

Project Description: Designed and deployed a digital manufacturing execution system to replace paper-based reporting and enhance floor-level visibility for production defects, quality control, and sensor-triggered alerts. Built using Spring Boot microservices and React.js frontend, the platform was deployed via Docker to AWS and integrated with Kafka and WebSockets for real-time machine telemetry.

Frontend
- Developed production and QA dashboards in **React.js** with **Redux Toolkit** and **Tailwind CSS**, which increased visibility into defect rates and reduced manual data entry.
- Applied **React Hooks** and **Formik** for dynamic form handling with built-in validations, improving data consistency and reducing rejections in QA reports across three shifts.
- Built a modular frontend using **React Router** and component-based design, streamlining navigation and simplifying future enhancements for plant-specific workflows.
- Enhanced application responsiveness using lazy loading and conditional rendering, which reduced load time on legacy devices during peak operational hours.

Backend
- Engineered REST APIs with **Spring Boot** and **Java 11** to synchronize data between QA terminals and ERP systems, removing delays from manual reporting and improving real-time accuracy.
- Implemented **Kafka**-based sensor event tracking with Spring WebSocket broadcasting, which enabled instant maintenance alerts and reduced equipment downtime.
- Applied **Spring Security** and **JWT**-based authorization with **RBAC**, strengthening role-level access control and aligning system permissions with IT audit protocols.
- Tuned **PostgreSQL** queries and configured connection pooling with **HikariCP**, cutting API response time during heavy traffic and supporting faster QA data ingestion.

Cloud
- Deployed containerized microservices to **AWS EC2** and managed infrastructure via **Docker** Compose and **GitLab CI,** resulting in faster QA-to-production transitions across all environments.
- Integrated **Jenkins** pipelines to automate build, test, and deployment stages, which improved release frequency and minimized configuration-related errors.
- Applied AWS IAM policies for controlled access to deployment environments and **S3** buckets, reducing access-related incidents and ensuring SOC 2 compliance readiness.
- Enabled performance observability using **CloudWatch** and **ELK Stack** visualizations, reducing time-to-resolution through real-time error diagnostics.

Software Developer   **Nov 2019 - May 2021**
Independent Bank | Michigan

Project Description: Developed and modernized Independent Bank's digital banking system, transforming paper-driven and legacy desktop operations into secure, real-time web services. Leveraged Spring Boot microservices and React.js UI to power customer onboarding, transaction tracking, and fraud alerting with Kafka and Redis integration. CI/CD was delivered using Jenkins, Git, and Maven.

Frontend
- Delivered responsive user interfaces using **React.js** and **Bootstrap**, enabling consistent banking experiences across desktop and mobile, which improved session duration .
- Enhanced form usability through dynamic validation and React Hooks, which lowered submission errors and improved onboarding completion rates .
- Structured UI navigation using **React Router** and **Axios** for real-time data updates, enabling fluid interaction without full-page reloads across critical banking modules.
- Built modular components with reusable logic and visual consistency, accelerating development cycles for new banking features and supporting compliance branding.

Backend

- Created Spring Boot **REST APIs** to handle digital account services, increasing transaction visibility and enabling branch-independent operations.
- Implemented **Kafka** producers for transaction event broadcasting and connected **WebSocket** listeners, allowing fraud analysts to detect anomalies within seconds.
- Cached high-frequency APIs like account balances using **Redis**, reducing response time and improving throughput during peak banking hours.
- Secured backend endpoints with **Spring Security** and **JWT authentication**, maintaining strong session integrity and aligning with industry-grade data protection standards.
- Developed unit and integration tests with **JUnit** and **TestNG**, boosting test coverage and helping prevent critical issues during production pushes.

Cloud
- Automated deployments through **Jenkins**-integrated CI/CD pipelines with **Maven** and **Git**, enabling daily build testing and rollback readiness for regulatory modules.
- Managed multi-environment configurations and hardened deployment security with encrypted credentials, enhancing control across QA, UAT, and production.
- Integrated monitoring using **ELK Stack** to track API usage patterns and spot anomalies, which reduced incident resolution time across key services.

Software Engineer   **Oct 2018 - Oct 2019**
Kinara Capital | Bengaluru, India

Project Description: Developed a digital lending solution to accelerate credit decisioning for micro-entrepreneurs across India. The platform enabled secure onboarding, automated credit scoring, and real-time KPI dashboards using Spring Boot, React.js, MongoDB, and Aadhaar/PAN integrations. The system helped Kinara scale loan disbursals without increasing operational load.

Frontend
- Built dynamic credit application forms using **React.js**, **Formik**, and validation logic, which improved applicant data integrity and reduced form rejection rates during onboarding.
- Enabled cross-page routing and asynchronous data access through **React Router** and Axios, streamlining navigation between KYC, scoring, and document upload screens.
- Developed real-time performance dashboards using **Chart.js** and custom React components, helping branch managers track disbursal trends and lending KPIs at a glance.
- Modularized UI logic into reusable components and standardized styling, reducing future development time and improving design consistency across borrower-facing workflows.

Backend
- Engineered microservices in **Spring Boot** and **Java 8** to support credit evaluation, KYC checks, and loan disbursal workflows, which reduced manual processing .
- Connected Aadhaar and PAN APIs through secured REST interfaces, accelerating identity verification and increasing the number of applicants processed daily .
- Applied **OAuth2** and **JWT**-based service authentication using Spring Security, which safeguarded sensitive borrower data and enforced internal access boundaries.
- Optimized **MongoDB** aggregation pipelines for fast lookup of customer histories and credit records, reducing backend response times and improving agent resolution rates.
- Developed integration and unit test cases with **JUnit** to validate business-critical scenarios in scoring logic, reducing regression issues during new product launches.

Cloud
- Containerized all backend and frontend components using **Docker** and deployed consistently across environments via GitLab **CI/CD**, ensuring stable multi-region rollouts.
- Automated versioned deployments and rollback procedures using **YAML**-based GitLab runners, increasing release reliability and minimizing service disruptions.
- Monitored API health through structured logging and performance counters, enabling early error detection and reducing average incident response time.

EDUCATION
Master of Science in Operations Management & Information Technology
Northern Illinois University, Chicago, IL

Bachelor of Technology in Computer Science
Vignan Institute of Information and Technology, India

CERTIFICATION
AWS Certified Developer – Associate