Sai Ganesh Varma Siruvuri

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PROFESSIONAL SUMMARY

Highly skilled and results-driven Full Stack Java Developer with over 3 years of professional experience in designing, developing, and deploying scalable enterprise applications using **Java, Spring Boot, Microservices, and React.js**. Proficient in building RESTful APIs, implementing security protocols using **Spring Security and JWT**, and deploying cloud-native solutions on **AWS and Azure**. Experienced in Agile/Scrum environments, CI/CD pipelines with **Jenkins and GitHub Actions**, and containerization using **Docker**. Adept at backend optimization, database design with **MySQL, PostgreSQL, and MongoDB**, and real-time data integration. Proven track record in delivering high-performance software solutions that align with business goals and industry best practices.

TECHNICAL SKILLS

- **Languages & Frameworks:** Java, Spring Boot, Spring Security, Hibernate, JavaScript, TypeScript, React.js, Node.js, JSP, HTML5, CSS3, Bootstrap, REST, SOAP
- **Cloud Platforms:** AWS (EC2, S3, Lambda, CloudFormation, RDS, IAM, API Gateway, DynamoDB, CloudWatch), Azure (App Services, Azure SQL, Functions, Azure DevOps, Blob Storage)
- **DevOps & Containers:** Docker, Kubernetes, Jenkins, GitHub Actions, Git, Bitbucket, Terraform (Basics), Helm
- **Databases:** MySQL, PostgreSQL, Oracle, MongoDB, Redis, Firebase
- **Build & CI/CD:** Maven, Gradle, Azure DevOps Pipelines, GitLab CI/CD
- **Testing & Monitoring:** JUnit, Mockito, Postman, Swagger, SonarQube, Log4j, Prometheus, Grafana, Application Insights
- **Big Data & Messaging:** Apache Kafka, RabbitMQ
- **Design & Methodologies:** Microservices Architecture, MVC, REST API Design, Agile (Scrum), TDD, UML
- **Others:** OAuth 2.0, JWT, Visual Studio Code, IntelliJ IDEA, Eclipse, Jira, Confluence

EXPERIENCE

Graduate Assistant – Data & Platform Ops **May 2024 – May 2025**
Northern Illinois University, Chicago

- Migrated legacy spreadsheet-based inventory tracking into a centralized full-stack web application using **Spring Boot (Java)** for the backend, **React.js** for the frontend, and **MySQL** for database management—improving data accuracy and enabling real-time operational insights across university departments.
- Designed and implemented **RESTful APIs** using **Spring Boot and JPA**, allowing seamless integration of dynamic inventory data across multiple department portals, eliminating redundant data entry and improving cross-functional reporting by 40%.
- Leveraged **Docker** to containerize the full-stack application and its analytics modules, enabling consistent development-to-production workflows and reducing deployment time across multiple environments by over 50%.
- Applied **Spring Security with JWT-based authentication** to enforce role-based access controls, ensuring that users had permission-limited access to sensitive operational data, aligning with university compliance protocols.
- Built **automated schedulers** within the Spring Boot framework to trigger report generation and database syncs at predefined intervals, minimizing manual reporting efforts and enhancing administrative efficiency.
- Tuned SQL queries and normalized the **MySQL** database schema to support high-transaction workloads with improved latency and response time, scaling the app to support over 100 concurrent users.
- Integrated **Axios** in the React frontend to securely call backend APIs and utilized **React Hooks** to manage application state, improving UX performance and data reactivity.
- Monitored API usage and application performance using **Postman and browser dev tools**, collecting user feedback and iterating on UI/UX improvements based on observed behavior and pain points.

System Engineer – Salesforce & Web Development **Oct 2021 – Jul 2023**
Tata Consultancy Services, Hyderabad

- Encountered performance bottlenecks and scalability issues in monolithic Salesforce CRM modules; re-engineered the system by implementing **Spring Boot-based microservices** with **MongoDB**, increasing modularity and reducing deployment downtime by 40%.
- Faced limitations in manual data processing within CRM systems; developed **custom RESTful APIs using Java, Spring MVC, and JPA** to automate CRM operations, enhancing data flow efficiency and reducing processing time by 30%.
- Identified inconsistencies in UI components and low reusability; implemented **modular React.js components** with **Redux** state management, improving front-end performance, maintainability, and UX consistency across the application.

- Manual build and deployment processes led to delays; automated the CI/CD pipeline using **Jenkins**, **Git**, and **Maven**, enabling rapid and reliable integration and delivery, cutting deployment times by 50%.
- Faced challenges in real-time external data sync; integrated **third-party APIs** using secure authentication protocols and asynchronous communication via **Node.js**, ensuring data consistency across systems and reducing lag by 25%.
- Encountered high defect rates due to limited test coverage; introduced **JUnit and Mockito**-based unit and integration tests, improving code reliability and reducing production defects by 30%.
- Reporting dashboards experienced latency due to unoptimized queries; refactored SQL logic and applied indexing strategies in **MongoDB**, increasing query performance and report generation speed by 35%.
- Observed inefficient sprint coordination; collaborated in **Agile sprints using Jira**, actively participating in planning, review, and standups to align with business requirements and deliver releases on schedule.

Data Analyst Intern – Production Insights **May 2019 – May 2020**
Bharat Heavy Electrical Ltd, Vizag

- Identified inefficiencies in manual reporting workflows and developed a Flask-based interactive dashboard using Python and SQL to track KPIs in real-time, reducing report preparation time by 35%.
- Encountered inaccurate production records and implemented data validation logic using Pandas and SQL, increasing data reliability for manufacturing forecasts and planning.
- Observed inconsistencies in historical logs and built Python automation scripts to extract, transform, and standardize daily production data from disparate sources, minimizing manual intervention.
- Detected cost leakages in operational reports and used SQL-based exploratory data analysis (EDA) to uncover optimization opportunities, directly supporting the cost-reduction strategy team.
- Noticed limited insight accessibility during executive reviews and automated the generation of summary reports and visualizations in Excel and Matplotlib, improving stakeholder communication.
- Faced scalability issues with documentation and established a structured repository using Git, enabling collaborative development and version control of ETL workflows and dashboards.
- Addressed lack of workflow visibility between teams by creating cross-functional data pipelines in Python, aligning shop floor data capture with analytics-ready formats.
- Improved turnaround for ad-hoc requests by designing a reusable query library and integrating SQL snippets into an internal knowledge base, streamlining future analytics efforts.

PROJECTS

Campus Operation Management System

- Faced inefficiencies in manual campus logistics and built a full-stack web application using Spring Boot (backend), React.js (frontend), and MySQL (database) to streamline inventory management and staff scheduling.
- Implemented secure, role-based access controls using Spring Security and JWT, enabling differentiated privileges for admins, faculty, and operations staff.
- Resolved performance bottlenecks in real-time queries by integrating Redis caching and Dockerized the entire application stack for seamless deployment across environments.

LLM-Based Netflix Success Predictor

- Identified the challenge of forecasting content success and fine-tuned OpenAI's GPT model on IMDb-tagged datasets using prompt engineering and NLP techniques to classify storylines based on success likelihood.
- Extracted semantic features using transformer-based embeddings and built a pipeline to process plot summaries, applying supervised learning to optimize accuracy.
- Deployed the model via a lightweight Flask dashboard with real-time input processing, achieving over 80% accuracy and enabling rapid scenario analysis.

Expense Tracker Web App

- Addressed the lack of personal finance insights by developing a mobile-responsive full-stack tracker using React for UI, Express.js for backend logic, and MongoDB for persistent data storage.
- Added productivity-focused modules such as timer logging, motivation alerts, and application tracking using Redux for state management.
- Leveraged Chart.js to visualize spending patterns and hosted the live application using GitHub Pages with integrated CI/CD for version control.

EDUCATION

Master of Science in Operational Management and Information Technology
Northern Illinois University Aug 2023 -May 2025
Bachelor of Technology in Mechanical Engineering
Vignan Institute of Information and Technology | Aug 2017 – May 2021