

Sai Lokesh Sanisetty

Software Development Engineer

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SUMMARY

Software Development Engineer with 5 years of experience in developing full-stack applications and backend systems across finance, manufacturing, and enterprise domains. Experienced in building scalable **RESTful APIs** and **microservices** using **Java Spring Boot**, **Python(FastAPI/Django, Flask)**, and designing robust data automation pipelines with **Airflow, PySpark**, and core **Python**. Skilled in **Java** development with **JPA** for persistence and **JUnit** for automated testing, ensuring high-quality, maintainable applications. Proficient in frontend development with **ReactJS, TypeScript** and **Redux**, with an emphasis on responsive and accessible interfaces. Hands-on expertise in deploying applications in **AWS (EC2, S3, Lambda, RDS, CloudWatch)** and managing containerized services using **Docker** and **Kubernetes**. Familiar with **CI/CD** automation via **Jenkins** and **GitLab**, ensuring streamlined and dependable cloud-native deployments. Passionate about clean architecture, performance tuning, and integrating **AI/LLM-powered experiences** into modern web applications.

TECHNICAL SKILLS

Programming Languages & Scripting:	JAVA(Spring Boot 3+, JPA 6, JUnit 5), PYTHON(FastAPI, Django REST Framework), TYPESCRIPT, JAVASCRIPT, C#, SQL, R, Go, HTML5/CSS3
Frontend & UI:	React 18+, Next.js 14 (App Router), Redux Toolkit, Tailwind CSS, shadcn/ui, Framer Motion, Responsive Design, Accessibility (WCAG)
Backend & APIs:	Microservices, GraphQL (Apollo), Flask, REST API Design, API Security (OAuth 2.1, JWT), OpenAPI 3.1, Rate-Limiting, Caching (Redis)
Cloud & DevOps Tools:	AWS (ECS Fargate, ECR, RDS, Lambda, S3, CloudWatch), Google Cloud Platform (GCP), Docker, Kubernetes(EKS), Terraform, Jenkins, GitHub Actions, GitLab CI/CD
Database & ETL Technologies:	PostgreSQL, MySQL, MongoDB, DynamoDB, Airflow 2.x, dbt, SQL Optimization, Data Modeling & Pipelines
Testing & Quality:	JUnit 5, Pytest, Jest, React Testing Library, Postman/Newman, TDD & Integration Testing
Monitoring & Analytics:	Grafana, Prometheus, AWS CloudWatch Dashboards, Logging & Alerting
Other Tools:	Unity 3D, Git, GitHub, GitLab, Bitbucket, Vite, Docker Compose, Makefile Automation, Notion, Linear, Agile Methodologies (Scrum/Kanban)

EDUCATION

Purdue University Master of Science in Computer Science	Hammond, IN Jan 2023 - Dec 2024
Lovely Professional University Bachelor of Technology in Electronics and Communication Engineering	India Aug 2016- May 2020

PROFESSIONAL EXPERIENCE

Bank of New York Mellon Software Development Engineer	IL, USA Feb 2025 – Current
<ul style="list-style-type: none">Modernize portfolio risk tracking platform with Spring Boot microservices for trade exposure analytics, improving modularity, scalability, and system resilience across client workflows.Integrate JPA with PostgreSQL to build robust persistence layers for transaction histories and client portfolios, streamlining data access patterns and boosting query performance for financial reporting.Design and execute JUnit test suites with over 90% coverage, reducing production defects and ensuring stable API rollouts in critical trading applications.Engineer secure REST APIs with OAuth 2.1 and JWT, integrated with AWS S3 and RDS, to manage client authentication and guarantee secure handling of transactional data.Automate ETL pipelines using Apache Airflow, processing data from Bloomberg feeds, internal ledgers, and custodial services, improving reporting refresh rates by 8x.Deploy containerized microservices with Docker and EKS, ensuring 99.99% uptime for the orchestration layer supporting financial data distribution.Streamline releases with CI/CD pipelines using GitHub Actions and Jenkins for faster compliance and reporting releases.Mentor junior developers in adopting Spring Boot, JPA, and Agile best practices, delivering 15+ sprint releases per quarter.	

Project 1: Integrated Virtual Blast Furnace (IVBF) Dashboard Development

- Built an interactive, **real-time industrial dashboard** for the **Integrated Virtual Blast Furnace (IVBF)** using Python(**Dash**), **React**, **HTML**, **CSS**, **JavaScript**, providing operational insights that increased furnace efficiency by 30%.
- Engineered simulation workflows and control panels to support industrial decision-making, applying **Responsive Web Design** and **UX/UI principles** to enhance accessibility and user experience.
- Developed modular API layers and deployed them on AWS EC2 using Docker, enabling scalable research operations. Integrated furnace operations and control data to deliver real-time metrics and visualizations that improved process performance.
- Adopted **Agile methodologies** to maintain iterative development and ensure timely, feedback-driven feature releases.

Project 2: VR-Based Crane Training Simulator

- Prototyped a **VR-based Crane Training Simulator** using **Unity** and **C#**, incorporating dynamic feedback loops to replicate real-world crane operations for immersive training.
- Designed interactive **UI elements** for crane functions, such as bucket navigation and lifting tasks, leveraging **Object-Oriented Programming (OOP)** and **Design Analysis** to improve user engagement and realism.
- Optimized system performance through integration with **Meta Quest VR** and physical controllers, leading to a 40% increase in trainee accuracy and a 20% reduction in operational errors.
- Collaborated with simulation engineers and instructional designers to refine interactive UX logic and system architecture, ensuring seamless execution and comprehensive technical documentation.

ACL DIGITAL**Software Development Engineer**

India

Dec 2020 – Jan 2023

- Built high-volume enterprise transaction workflows by combining **Django** and **Spring Boot REST APIs**, improving security and performance for client-facing portals in the financial sector.
- Implemented **JPA-based ORM mappings** to replace legacy SQL queries, simplifying database interactions, improving maintainability, and reducing query execution times.
- Developed automated regression suites using **JUnit**, integrated into CI/CD pipelines, enabling earlier failure detection and smoother deployments.
- Delivered responsive, modernized UIs with **ReactJS** and **REST APIs**, enhancing usability and reducing average navigation time across five client portals.
- Automated deployments via **Jenkins** and **Docker**, reducing downtime and minimizing release errors during iterative rollouts.
- Optimized legacy codebases with strong **OOP** practices and design patterns, cutting bug rates and enhancing monitoring with **AWS CloudWatch**.
- Improved application observability using **Grafana** and **Prometheus**, enabling real-time performance tracking and mitigating latency issues during peak loads.
- Enhanced analytics dashboards by optimizing schemas and queries in **MySQL** and **MongoDB**, hosted on **AWS RDS** and **DynamoDB**, enabling faster insights for end clients.

Adani Group**Software Engineer**

India

Jan 2020 – Nov 2020

- Extended the logistics tracking platform by developing **Spring Boot microservices** in **Java**, enabling real-time integration of IoT sensor data into operational workflows.
- Applied **JPA** to design ORM models for logistics and transportation data, reducing persistence complexity and improving query consistency.
- Authored **JUnit test cases** to validate **Flask** and **Spring Boot APIs**, ensuring reliability and cross-framework consistency for production-grade systems.
- Built backend services in **Python (Flask)** to synchronize logistics data and track port operations, ensuring low-latency updates for operations teams.
- Integrated **REST APIs** to streamline sensor pipelines and automate status updates across supply chain workflows.
- Tuned SQL queries and applied indexing strategies in **PostgreSQL**, reducing report generation latency.
- Delivered visual insights using **Matplotlib** and **Power BI**, supporting data-driven decisions that improved efficiency.

CERTIFICATION

- **Advanced Python Programming** – Coursera (by University of Michigan)
- **Cloud Computing Specialization** – Coursera (by University of Illinois)
- **Boomi Professional Developer** – Dell Boomi
- **IBM AI Developer Certificate** – Coursera (by IBM)
- **Machine Learning Specialization** – Coursera (by University of Washington)
- **Programming the Internet of Things** – Coursera (by University of California)