Sai Lohith Panthangi

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Professional Summary

Software Engineer with **3+ years of experience** building **high-scale, user-facing web platforms** in education and enterprise environments. Specialized in developing **React and TypeScript-driven workflow systems** backed by **Java/Spring Boot microservices**, **PostgreSQL**, and **Kafka-based event pipelines**. Delivered measurable impact including **28% faster APIs**, **22% faster large-scale data ingestion**, and a **25% increase in active product usage** by optimizing performance and simplifying complex admin workflows. Experienced operating in **AWS serverless** and **Docker/Kubernetes environments** with **CI/CD automation** and **production monitoring**. Strong collaborator in **Agile teams**, translating product requirements into **scalable, resilient, production-ready solutions**.

Experience

Amplify Education **Sep 2024 – Present**

Software Engineer *Seattle, USA*

- Owned delivery of React + TypeScript admin workflows used by 5,000+ schools and districts, improving end-to-end enrollment and roster management usability for daily educator operations.
- Drove a unified Admin Portal experience for rostering and access management (staff, classes, permissions), reducing workflow friction and contributing to a 25% increase in active usage.
- Orchestrated backend capabilities in Java/Spring Boot and exposed REST APIs to enable role-based access control and configuration features across admin workflows.
- Implemented event-driven orchestration using AWS Lambda, API Gateway, S3, and SNS, improving resiliency during peak usage and reducing inter-service latency by 19%.
- Improved data-path performance via PostgreSQL indexing, Redis caching, and query tuning, cutting API response times by 28% and accelerating large roster ingestions by 22%.
- Integrated Kafka-based event flows to keep admin state consistent across distributed services, and strengthened reliability through CI/CD automation with GitHub Actions and CloudWatch telemetry, enabling safer deployments and faster detection of workflow regressions.
- Leveraged AI-assisted development (GitHub Copilot) to accelerate implementation and refactoring while maintaining quality through tests and code reviews, improving delivery speed across iterative releases.

Verizon **Jan 2021 – Jan 2023**

Software Engineer, Full Stack Developer *Hyderabad, India*

- Built and operated workflow experiences for Verizon's internal Canvas platform using Java, Spring Boot, React (JavaScript), and REST APIs, contributing to a program that automated 95% of manual email/chat/phone hand-offs between provisioning and engineering teams, reducing operational overhead at scale.
- Shipped scalable, stateless service patterns and client-facing flows to support high-volume provisioning workflows, making explicit availability vs consistency tradeoffs to maintain throughput and improve platform scalability by 30% under peak load.
- Enabled automation-first operations by integrating event-driven and orchestration components (Kafka and platform automation hooks) in a broader Canvas initiative reported to automate 173,000+ hours of manual work across 66 bots, improving speed-to-resolution and lowering labor costs.
- Engineered secure authentication and authorization using OAuth2, JWT, and role-based access control (RBAC), strengthening compliance workflows and reducing verification delays by 20%.
- Deployed, monitored, and optimized services on AWS (EC2, S3, CloudFront, DynamoDB, ELB), balancing performance SLAs with cost efficiency through infrastructure tuning and monitoring.

Projects

4S Navigation Tool Extension for Visual Studio Code | *Java, TypeScript, VS Code APIs* **Oct 2023 – Dec 2023**

- Developed an approved VS Code extension integrating Go to Definition, Sub-word Search, and Stack Overflow Search, streamlining developer navigation across large codebases.
- Published on the VS Code Marketplace with a 5/5 rating, demonstrating adoption, usability, and engineering impact.

YouTube Insight Generator (RAG Application) | *Python, OpenAI, Pinecone, Whisper* **Nov 2023 – Dec 2023**

- Orchestrated a Retrieval-Augmented Generation (RAG) system integrating OpenAI GPT-3.5 Turbo, Whisper, and Pinecone to enable real-time insights from YouTube videos.
- Engineered an automated pipeline for transcription, embedding, and semantic retrieval, optimizing response accuracy and latency for AI-powered video querying.

Student Survey Web Application (Full-Stack) | *Angular, Spring Boot, REST APIs, MySQL* **Oct 2023 – Nov 2023**

- Developed a full-stack web application enabling users to submit, view, update, and delete campus-visit survey data through a responsive Angular UI with routing and form validation.
- Implemented RESTful CRUD APIs using Spring Boot and Spring Data JPA, integrated with a MySQL database, including CORS configuration and schema management.

Technical Skills

Languages: Java, Python, TypeScript, JavaScript (ES6+), C, C++
Frontend: React, Angular, HTML5, CSS3
Backend & APIs: Spring Boot, REST APIs, Microservices, Apache Kafka
Cloud & DevOps: AWS (EC2, S3, Lambda, API Gateway, SNS, CloudFront), Docker, Kubernetes, GitHub Actions, CloudWatch
Databases & Caching: PostgreSQL, MySQL, DynamoDB, Redis, SQL, Data Modeling, Query Optimization
Security: OAuth2, JWT, Authentication & Authorization, API Security
AI & Core CS: OpenAI APIs, Pinecone, Whisper, Design Patterns, Distributed Systems, Code & design reviews, Data Structures & Algorithms

Education

George Mason University — **Jan 2023 – Dec 2024**
Master's in Computer Science, ***CGPA: 3.93/4.0*** — *Fairfax, Virginia, USA*

Sreenidhi Institute of Science and Technology — **May 2017 – Apr 2021**
Bachelor of Technology in Computer Engineering, ***CGPA: 3.88/4.0*** — *Hyderabad, Telangana, India*

Technical Certifications

- **AWS Certified Developer - Associate** (Oct 2024 - Oct 2027).
- **Microsoft Azure Fundamentals(AZ-900)**
- **Google Foundations of User Experience (UX) Design)** (June 2024 – June 2027)