Alisala Mwamba

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EDUCATION

Iowa State University

Bachelor of Science in Software Engineering | Applied Mathematics Minor   *Expected Dec 2026*

- **Focus: Software Engineer |Backend | Frontend | Distributed Systems | Cloud**
- **Related Coursework:** Data Structures & Algorithms, Object-Oriented Programming, Operating Systems and Linux, Databases & Query Optimization, Computer Architecture and Machine Level Programming, Software Architecture and Design, Embedded Systems and Digital Logic, Software Construction & Secure API Design, Software testing

SKILLS

Programming: Java, Go (Golang), SQL, Python, C programming, JavaScript/TypeScript (Node.js)
Distributed & Data: Apache Kafka, ETL Pipelines, Real-time Systems, Microservices, LangChain
Cloud & Platforms: Docker, GitHub Actions (CI/CD), AWS (EC2, S3, RDS), Linux, Shell/Bash
Frameworks & APIs: PostgreSQL, FastAPI, Firebase, Express.js, React.js, Tailwind, CSS, Vite, Secure API (REST, JWT, RBAC)

PROJECTS

FlowPlus (github)

Workflow Automation Platform | Node.js, Express, PostgreSQL, Kafka | Personal Project   *Oct 2025 –*

- Architected an event-driven workflow automation platform using **Node.js**, **Express**, **PostgreSQL**, and **Kafka**.
- Engineered **ETL** pipelines for real-time event ingestion, transformation, and routing in a multi-step orchestration system.
- Developed a **React** + **Vite** and **Tailwind CSS** dashboard for monitoring task progress and system metrics.
- Containerized all services using **Docker** for reproducible and ensuring scalable deployments.

CourseGPT (github)

AI-Powered Educational Support Tool | Python (FastAPI), React, PostgreSQ   *Aug 2025 –*

- Developed a secure **FastAPI** backend to serve as an API layer for **LLM** models and external platforms (Discord, Canvas)
- Implemented **RAG** pipelines with LangChain and PostgreSQL for context-aware, auditable AI responses.
- Designed and enforced **secure API** access using JWT authentication and Role-Based Access Control (RBAC).
- Built **React** and **TypeScript** dashboards for monitoring and analytics of **200+** students for engagement
- Automated the entire CI/CD pipeline using Docker + GitHub Actions (CI/CD) and Gitlab for seamless deployments.

Kafka Sync (github)

Distributed File Synchronization System | Go, Apache Kafka, Docker| Personal Project   *June 2025 – Oct 2025*

- Engineered a distributed file synchronization system in **Go** utilizing **Apache Kafka** for high-throughput messaging.
- Leveraged Go's concurrency model (**goroutines**) to build efficient and parallel producer/consumer services.
- Ensured fault-tolerant and secure file transfers by integrating LFTP over SFTP with automated retry logic.
- Built a **React** monitoring dashboard for real-time observability of file events across a multi-node environment.

EXPERIENCE

Walmart

Digital   *June 2024 –Mar 2025*

- Coordinated high-volume orders, improving preparation speed under deadlines.
- Served as acting shift lead, enhancing **team coordination** and **problem-solving.**

Amazon

Stower   *June 2022 – Aug 2023*

- Collaborated across teams to meet quota, improved efficiency by **10%**, demonstrating adaptability and communication.

ACTIVITIES AND LEADERSHIP

Computer Engineering and Software Engineering Club

 A member of the SE club, organize coding workshop, participate and collaborate on real-world projects.   *Aug 2022 –*

National Society of Black Engineers

Participates in weekly workshops to enhance technical, communication and leadership skills.   *Aug 2023 –*

Science Bound

 A scholar mentored **10+** high school students in STEM, promoting leadership and academic excellence.   Aug 2018 –