Elijah Achala

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Profile

Machine Learning Engineer with expertise in **Agentic AI** and **LLM workflows**, skilled in **LangChain**, **LangGraph**, and **RAG-based systems**. Proficient in **Python**, **JavaScript (React, Node.js)**, SQL, and JSON pipelines. Experienced in building multi-agent systems, structuring datasets, and ensuring **high data quality** for fine-tuning and evaluation of large language models.

Technical Skills

- **Languages**: Python, JavaScript (React, Node.js), SQL

- **AI & Agents**: LangChain, LangGraph, RAG pipelines, function-calling workflows, prompt engineering

- **Data Handling**: JSON validation/structuring, dataset preparation, data splitting, vector databases

- **Cloud:** AWS (Amazon Web Services)

- **Tools**: Git, VS Code

Projects

Agentic Authoring Assistant

- Implemented an AI authoring system that generated titles, tags, summaries, references and validated their consistency using **LangChain + LangGraph**, improving metadata accuracy and research productivity.

Research Assistant (RAG-based)

- Built a **vector database–powered retrieval system** using **RAG** to answer user queries based on embedded research works, reducing irrelevant outputs and significantly enhancing retrieval reliability.

Multimodal Agent (Video/Audio/Text QA)

- Developed an agent capable of **transcribing video/audio** and enabling QA over transcribed or uploaded text using **LangGraph**, which increased accessibility and content usability.

Unix Shell Implementation (C)

- Developed a robust Unix-like shell in C, implementing core functionalities such as process creation, program execution, and inter-process communication (pipes). This project deepened understanding of operating system fundamentals and low-level programming, showcasing advanced C programming skills.

Blog Platform (React, Node.js, Express.js, SQL)

- Engineered a comprehensive blog platform with full CRUD capabilities, utilizing a scalable Node.js/Express.js RESTful API and a responsive React.js frontend. Demonstrated proficiency in modern full-stack web development and efficient SQL database management.

Education

Kwame Nkrumah University of Science and Technology | 2022 - 2025

Bachelor of Science in Computer Engineering.

Academic Standing*:* First Class.

Relevant Coursework*:* Data Structures and Algorithms, Computer Networking, Computer Graphics, Object-Oriented Programming, Database Systems, Discrete Mathematics.

Leadership Experience

Team Lead - Portfolio Website Project | KNUST

- Spearheaded and managed a team of learners in the end-to-end conceptualization, design, and development of a fully functional portfolio website, significantly enhancing team members' practical development skills and delivering a valuable professional resource.

Certifications and Honors

- Amazon Certified Cloud Practitioner
- ALX Software Engineering Training Certificate