AARON KATEY KUDADJIE

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EDUCATION

University of Ghana - Legon, Ghana

Graduating: Sep 2025

Major: BSc. Computer Science

Relevant Coursework: Software engineering, Multimedia and Web design, Mobile Application development, Database Management, Machine learning, Computer networks, Human Computer Interaction, Data Structures and Algorithms, Cloud Computing.

EXPERIENCE

AmaliTech Ghana – East-Legon, Ghana *Backend Developer (Intern)*

Mar 2024 - Apr 2024

- Collaborated with a team of developers to design, develop, and implement backend solutions for various web applications, utilizing technologies such as Typescript, NodeJS and ExpressJS.
- Managed and optimized PostgreSQL databases with the aid of Prisma ORM, ensuring efficient data retrieval and storage, and implemented complex queries to support application functionalities.
- Engaged in code reviews and optimized existing code to enhance performance and scalability, reducing load times and improving overall application efficiency by 5%.
- Performed extensive testing and debugging of backend components to identify and resolve issues, ensuring reliable and bug-free software delivery.
- Created comprehensive documentation for developed features and systems, facilitating easier maintenance and future development.
- Participated in Agile development practices, including daily stand-ups, sprint planning, and retrospectives, contributing to efficient project management and delivery.

TECHNICAL SKILLS

- Languages: Proficient in Python, Familiar with Java, JavaScript, Typescript, C#, SQL
- Version Control: Git and GitHub.
- Automation: Selenium.
- **Web Technologies**: HTML, CSS, JavaScript, Typescript, Tailwind CSS, React, NodeJS, ExpressJS, Fast API, Java Spring Boot.
- Databases: SQLite, MySQL, MongoDB, PostgreSQL
- **Cloud technologies**: Google cloud technologies, Oracle Cloud.
- Other: Problem solving, Communication, Data Structures and Algorithms, Microsoft Office Suite.

SparOnlineV1.0 – Web Game Development (Full Stack)

Tech Stack: React · Node.js · Express.js · Colyseus.js · MongoDB

- Developed a real-time, event-driven **multiplayer web game** replicating the logic of the Ghanaian card game *Spar*.
- Built a responsive **frontend with React**, and a scalable **backend using Node.js**, **Express.js**, **and Colyseus.js** for handling WebSocket communication, game state management, and matchmaking.
- Currently planning to integrate a **machine learning-based bot** to simulate intelligent human-like gameplay.
- [Link: SparOnline V1.0]

Gunshot Detector API – Web Development (Backend)
Tech Stack: Python · FastAPI · Telegram Bot API

- Created a **FastAPI server** to integrate a gunshot detection model with a Telegram bot.
- The server receives **WAV** audio files, processes them using a trained model, and sends detection results to a specified **Telegram channel** in real time.
- [Link: Gunshot Detector API]

Employee Management System API – Web Development (Backend)

Tech Stack: Java · Spring Boot · MySQL

- Designed and developed a simple **RESTful API** to perform full CRUD operations on employee records stored in a MySQL database.
- Implemented features including **input validation**, **exception handling**, and **secure authentication**, ensuring robust and efficient system interactions.
- [Link: <u>EMS</u>]

Automatic Wallpaper and Quotes Downloader – Web Automation

Tech Stack: Python · BeautifulSoup · Requests

- Built a **web scraper and automation script** to extract wallpapers and motivational quotes from a website.
- Automated **bulk downloads** of scraped content to local storage.
- [Link: Bulk Wallpaper and Quotes Downloader]

CERTIFICATIONS AND ACHIEVEMENTS

- Certificate of Completion, Internship AmaliTech Ghana, May 2024 View Certificate
- First Runner Up, GAIATHON 2024 Hackathon GAIAClubs, Sept 2024

Worked with a team of undergraduates to develop an innovative solution addressing wildlife poaching. The solution integrated a FastAPI server with a pre-trained gunshot detection model to accurately identify gunshots from sounds detected by microphone sensors mounted on GAIA boards in real-time. This system alerts authorities via a Telegram bot.

Project Link

• Quarter Finalist, A2SV Generative AI for Africa Hackathon – A2SV, Dec 2023

Developed an innovative solution with a team of like – minded individuals across the African continent to provide a solution for the health sector by utilizing generative AI models like ChatGPT 3.5 model for quicker medical diagnosis based on patient's medical records.

View Certificate

• Participant, PyData Data Science Bootcamp – PyData Ghana, Apr 2022

Gained hands-on experience in data analysis, web scrapping, and data visualization using technologies such as Python, NumPy, Pandas and Selenium

View Certificate