

# Curriculum Vitae

## Adam Musakabantu Muyobo

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GitHub Portfolio: [github.com/Adam-Muyobo](https://github.com/Adam-Muyobo)

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## Personal Details

Date of Birth: 09 December 2003

Citizenship: Zambian

Occupation: Student

## Professional Summary

Artificial Intelligence and Data Engineering oriented Software Engineer with over 5 years of progressive experience gained through apprenticeships, internships, and part-time roles. Strong background in machine learning fundamentals, data-driven system design, RESTful API development, and scalable backend architectures using Java, Python, Spring Boot, Fast API and modern data technologies. Experienced in healthcare-related systems, analytics-ready APIs, and Agile collaboration. Seeking to apply and advance my skills in AI and Data Engineering within a challenging research or applied systems development role.

## Experience

### IT Technician (Part-Time, Remote) -- *Pyrotech Fire Services*

Jun 2025 -- Present

- Provide IT support and system maintenance, ensuring reliable network, hardware, and software operations and improving system reliability by approximately 30%.
- Participate in the R&D of intelligent fire suppression systems, implementing deep learning models with PyTorch/TensorFlow to improve threat detection accuracy.
- Support troubleshooting and optimization of technical infrastructure, enhancing operational continuity.

### Software Developer (Part-Time, Remote) -- *Zambezi Ultima*

Jan 2021 -- Present

- Leading development of a hotel booking and management system tailored to operational and administrative workflows.
- Building full-stack modules for reservations, room management, customer records, and hotel operations.
- Designing and implementing scalable system architecture and business logic for an end-to-end hospitality platform.

### Software Development Intern -- *University of Botswana Computer Science Department*

Jun -- Jul 2024

- Designed and executed a Python-based system to retrieve, process, and store over 100,000 African computer science publications from DBLP and OpenAlex APIs, creating a structured database for research.
- Curated and validated a subset of 10,000+ publications used to train a machine learning model for automated publication recognition, reducing manual vetting time by over 50%.

**Java Backend Developer** (Apprentice, Part-Time, Remote) -- *Reinventory, Newcastle, UK*  
May 2021 -- Jan 2024

- Designed and implemented production-grade RESTful APIs using Java and Spring Boot for inventory management systems, supporting high-volume transaction processing.
- Built and optimized relational database schemas (PostgreSQL/MySQL), improving data integrity and query efficiency.
- Participated in Agile ceremonies, including code reviews and sprint planning, contributing to system refactoring and the delivery of secure, scalable backend solutions in collaboration with an international remote team.

## Leadership & Community

**Technical Lead** -- *Google Developer Groups on Campus, University of Botswana*  
October 2025 – Present

- Lead technical planning and execution of developer events, workshops, and student initiatives.
- Support students in software engineering, AI, mobile, and backend development activities.
- Coordinate technical direction for projects, demos, and community learning sessions.

## Technical Skills

### Programming Languages

- **Proficient:** Java, SQL, Haskell
- **Experienced:** Python, JavaScript, Dart, Bash
- **Basic/Familiar:** PHP, C, C++, C#

### Artificial Intelligence & Data

- Machine Learning Fundamentals (Scikit-learn, TensorFlow, PyTorch), Spring AI, Data Preprocessing & Feature Engineering, Prompt Engineering, Predictive Modeling, Data Analytics & Evaluation

### Data Engineering & Databases

- PostgreSQL, MySQL, Database Design & Query Optimization, Data Modeling, Structured Data Processing, MongoDB

### Backend & Systems

- Spring Boot, Hibernate / JPA, RESTful API Design & Development, Authentication & Authorization (JWT, OAuth2), API Documentation (OpenAPI / Swagger)

### Tools & Platforms

- Git / GitHub, Linux (Ubuntu, Kali), Firebase, RabbitMQ (Basic), Docker, Flutter, React, Next.js

## Projects

### **Healthcare Product Delivery System** -- *Founder / Full-Stack Developer (Ongoing)*

- Developed a full-stack system using Spring Boot (Backend), Flutter (Mobile), and React (Admin Dashboard) for managing medical product logistics.
- Implemented secure, role-based access control (JWT) and encrypted data handling for sensitive health information.
- Successfully integrated patient record retrieval and inventory APIs, creating a centralized service platform.

### **Nuka POS** -- *Sole Developer (GitHub)*

- Built a full-featured Point-of-Sale system for SMEs with Spring Boot, Flutter, and MySQL.
- Engineered core modules for inventory, sales, customer management, and automated audit logging.
- Designed a scalable transaction schema that handles daily operations for small retail environments.

### **FHIR Hackathon Project** – *Team Project Lead (GitHub)*

- Led the design and development of Fast Healthcare Interoperability Resources (FHIR) compliant APIs to enable standardized clinical data exchange.
- Created data models and endpoints for patient demographics and clinical observations, facilitating integration between disparate healthcare systems.

## Education

### **Bachelor of Science in Computer Science**

*University of Botswana, Gaborone, Botswana*

August 2021 -- May 2026 (Expected)

Key Coursework: Introduction to Artificial Intelligence, Intelligent Systems, Database Systems, Introduction to Software Engineering, Software Design, Software Project Management, Systems Programming, Computer Networks, Requirements Engineering.

### **Secondary Education**

*Saint Ignatius College - Leopards Hill, Lusaka, Zambia.*

2016 -- 2020

## Certifications

- IGNITE Program: Artificial Intelligence Course
- Amigoscode Java Functional Programming
- Amigoscode Spring Boot I/O

## Achievements

- Cavista Hackathon Theme B Winner – Ngaka Assist, Legacy Developers, 2026
- Top 3 National Finalist -- PicoCTF 2024 (Botswana)
- FHIR Hackathon & Training Program Participant
- World Scholars Cup -- Lusaka & Beijing Global Rounds Champion (2019--2020)

## Languages

- **Native:** English, Chilenje, Chinyanja
- **Basic/Conversational:** Russian, German, Arabic, Spanish