

SIMON ZOTOO

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PROFESSIONAL SUMMARY

Solution-oriented Information Technology graduate (BSc, June 2026) with hands-on experience in full stack web development (PHP, JavaScript, HTML, CSS, MySQL), database administration, and IoT systems. Founder of a software consultancy delivering web and database solutions to businesses, schools, and churches in Accra, with 35 public GitHub repositories spanning Python, Java, PHP, and JavaScript. Completed a database internship at Ghana's national pension agency (SSNIT) and served as teaching assistant for five computing courses. Elected president of a 2,000-student computing association. Strong foundation in the SDLC, Agile practices, REST APIs, secure coding, and troubleshooting, with a record of shipping practical software for real users.

TECHNICAL SKILLS

Programming Languages: Python, Java, C, C++, PHP, JavaScript, SQL, Bash

Web Development: HTML5, CSS3, JavaScript, PHP, REST APIs, JSON, MVC architecture, responsive design, UI/UX fundamentals, full stack development

Databases: MySQL, Microsoft SQL Server, Firebase Realtime Database, ER modeling, schema design, normalization, indexing, query optimization, database administration, ETL

Data Analysis & BI: Pandas, NumPy, Matplotlib, Jupyter Notebooks, exploratory data analysis, data cleaning, data visualization, Power BI, Excel (pivot tables, dashboards)

AI & LLM Tools: Anthropic Claude API, prompt engineering, AI agent design, Model Context Protocol (MCP)

Cloud & IoT: Firebase Cloud Messaging, AWS (fundamentals), Google Cloud (fundamentals), ESP32, Arduino, sensor-to-cloud data pipelines

Operating Systems & Networking: Linux, Windows, LAMP/XAMPP stack, TCP/IP socket programming, system administration fundamentals, troubleshooting, technical support

Cybersecurity: Role-based access control (RBAC), SQL injection prevention (parameterized queries), password hashing, audit logging, secure coding practices

Version Control & Tools: Git, GitHub, code review, technical documentation

Methodologies: Agile, Scrum, SDLC, object-oriented design, team collaboration

PROFESSIONAL EXPERIENCE

Founder & Lead Developer — Jay-Tech Solutions, Accra, Ghana

2023 – Present

- Founded and operate a software consultancy delivering custom websites, web applications, and database systems (PHP, MySQL, JavaScript) for local businesses, schools, and churches across Accra.
- Developed multiple end-to-end systems, including a school management system, an online voting system, a church management platform, and a learning management system.
- Own the full software development life cycle on every client engagement: requirements gathering, database design, development, testing, deployment, and ongoing technical support.
- Built and published 35 open-source repositories on GitHub across Python, Java, PHP, JavaScript, and MySQL.

Undergraduate Teaching Assistant — Wisconsin International University College, Accra

2024 – Present

- Lead weekly labs and review sessions for five courses (C++ Programming, Software Engineering, Embedded Systems, Distributed Systems, Human-Computer Interaction), supporting approximately 100 students per semester.
- Deliver one-on-one debugging support, code reviews, and assignment walkthroughs, strengthening students' programming fundamentals and problem-solving skills.

Database Intern — SSNIT (Social Security and National Insurance Trust), Accra

May – Aug 2024

- Supported the database team at Ghana's national pension agency on production systems holding contribution records for millions of workers.
- Performed data validation, reviewed SQL queries for correctness and performance, and assisted with access-control checks under senior DBA supervision.
- Participated in incident-triage sessions and documented recurring database issues in internal notes adopted by the team.

PROJECTS

IoT LPG Gas-Leak Detection System

ESP32, C++, Firebase, JavaScript

- Designed and built a low-cost (~US\$15) gas-leak detector for small-business kitchens: an MQ-2 sensor on an ESP32 streams readings to Firebase Realtime Database and triggers mobile push alerts via Firebase Cloud Messaging within seconds of a leak.
- Wrote the device firmware in C++ and the alert-handling logic in JavaScript; extending the system with an on-device machine learning model to filter false positives from steam and cooking smoke.

Secure Student Finance Portal

PHP, MySQL, Database Security

- Designed the database schema, role-based access control, and audit-logging system for a university finance portal sized for approximately 5,000 student accounts.
- Implemented parameterized queries and password hashing throughout; produced complete ER diagrams and an encryption-at-rest plan.

Java Banking System & Open-Source Portfolio

Java, Swing, JDBC

- Developed a banking application with console and Swing GUI interfaces supporting login, transfers, and CSV statement export, structured with service classes and DAOs.
- Additional public projects at github.com/Simonzotoo include a school management system, an online voting system, a church management platform (PHP/MySQL), a Python TCP-socket chat application, a learning management system, and a car rental database design.

LEADERSHIP

President — School of Computing and Technology Students' Association, WIUC-Ghana

2025 – Present

- Elected to lead a student body of 2,000+ undergraduates across IT, Computer Science, and Software Engineering programs.
- Chair the executive committee and monthly general assembly; represent students to the Dean's office on academic, welfare, and curriculum matters.
- Organize coding workshops, project showcases, industry guest talks, hackathon participation, and welfare drives.

EDUCATION

Bachelor of Science in Information Technology

June 2026

Wisconsin International University College, Accra, Ghana

- Relevant coursework: Database Systems, Database Administration, Software Engineering, Distributed Systems, Embedded Systems, Data Structures & Algorithms, Object-Oriented Programming (C++), Machine Learning.

CERTIFICATIONS

Google: Foundations of Cybersecurity

Anthropic (2026): Building with the Claude API; Claude 101; Claude Code 101; Claude Code in Action; Introduction to Agent Skills; Introduction to Claude Cowork; Introduction to Model Context Protocol (MCP)

LANGUAGES

English (full professional proficiency), Twi (native), Ewe (native)