

EMMANUEL BREWU AGYEI

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PROFESSIONAL SUMMARY

Computer Science graduate with hands-on experience building full-stack web applications and software systems using HTML, CSS, JavaScript, PHP, MySQL, Java, and Python. Developed and publicly deployed a full-stack campus news portal with authentication, review workflows, role-based publishing, and relational database design. Strong foundation in software engineering, data structures, databases, data science, and information security, with a practical approach to writing clear, maintainable code and explaining technical decisions. Interested in building precise interfaces and data-driven tools that make complex information easier for people to understand.

EDUCATION

BSc. Computer Science | Ashesi University Berekuso, Ghana | June 2025

Cumulative GPA: 3.09/4.00

Relevant coursework: Web Technologies, Software Engineering, Data Structures & Algorithms, Data Science, Database Management, Information Security, Operating Systems, Networks & Data Communications

MasterCard Foundation Scholar Program Aug 2021 – Jun 2025

EXPERIENCE

Faculty Intern – Students Life & Engagement | Ashesi University

Berekuso, Ghana | Aug 2025 – Present

- Taught core subjects at Berekuso Basic Schools, adapting lesson delivery to student needs while promoting critical thinking and active learning.
- Served as a liaison between Ashesi University and Berekuso Basic Schools, coordinating communication and collaborative projects across stakeholders.
- Led the integration and supervision of Ashesi student-led service initiatives, aligning projects with educational goals and community priorities.
- Used Ashesi academic resources and IT infrastructure to design enriched learning experiences and improve education delivery.

TECHNICAL PROJECTS

Campus News Portal – Full-Stack Web Application | Web Technologies Course

Jun – Aug 2024

- Developed and publicly deployed a full-stack platform for publishing and managing student-written news using HTML, CSS, JavaScript, PHP, and MySQL.
- Designed and normalized relational tables for administrators, categories, and posts, supporting structured content management.
- Implemented authentication, review workflows, and role-based publishing to control how content moved through the platform.
- Integrated frontend elements with PHP/MySQL backend services to support dynamic content and administrative workflows.

Database Security Design – QuickShop E-Commerce Platform | Information Security Course

Mar – Apr 2025

- Collaborated in a four-member team to design a secure relational database covering users, products, orders, and order details.
- Implemented bcrypt password hashing, secure session tokens, role-based access control, SQL GRANT/REVOKE privileges, and least-privilege access.
- Used parameterized queries and stored procedures to reduce SQL injection risks and improve the reliability of database interactions.

LUCID – Lightweight AI-Based DDoS Detection System | Ashesi University Capstone

Aug 2024 – May 2025

- Designed and implemented a lightweight CNN-based detection system focused on computational efficiency and real-time responsiveness.
- Integrated live multithreaded packet capture, prediction, and logged alerts for real-time monitoring.
- Applied pruning, quantization, multiprocessing, and Optuna-based hyperparameter tuning, reducing training time by 90% and improving inference speed by 35%.

IT HUB / HURUPAY – Software Solutions | Design Lab, Ashesi University

Jun – Aug 2022

- Coordinated cross-functional teams developing two software solutions, managing project scope, task delegation, resources, and presentations.
- Worked collaboratively with team members to develop solutions while maintaining alignment with academic and industry expectations.
- Delivered projects 15% under budget and ahead of schedule.

TECHNICAL SKILLS

Frontend & Web: HTML5, CSS3, JavaScript, PHP, full-stack web development

Backend & Databases: PHP, MySQL, SQL, relational database design, authentication, RBAC, parameterized queries

Programming: Python, Java, JavaScript, SQL

Data & Systems: Data science, CNNs, model optimization, multiprocessing, Linux, networking

Security: Information security, secure sessions, access control, SQL security, DDoS simulation

Tools: GitHub, Microsoft Excel, Word, PowerPoint, Outlook

AI-assisted development: ChatGPT, Claude, GitHub Copilot, Gemini

LEADERSHIP & COMMUNITY

Children's Church Teacher | Methodist Church, Akwanserem | June 2015 – Present

Design interactive, age-appropriate lessons and activities for 60+ children weekly; mentor children and collaborate with parents to support engagement and growth.

CERTIFICATIONS & ADDITIONAL TRAINING

- Networking Basics – Cisco Networking Academy | Apr 2025
- Operating System Basics – Cisco Networking Academy | Nov 2024
- Technical Support Fundamentals – Coursera | Sep 2022
- Exercising Leadership: Fundamental Principles – Harvard University / KSG | Apr 2022