

Jeffrey Asamoah

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Summary

I am a technology and Computer Science enthusiast with a passion for Human-Centered AI, Machine Learning, and Human-Computer Interactions. I focus on addressing real-world challenges, particularly in Africa, through research and innovation, while emphasizing ethical AI implementation. With a Bachelor's and Master's in Computer Science, I aim to collaborate with like-minded individuals to apply modern computing principles and impart knowledge to future generations.

Education

Kwame Nkrumah University of Science and Technology, PhD in Computer Science, Kumasi, Ghana Jan 2025 – Present

- Courses: Research and Dissertation, Computer Vision and Image Processing, Professional Development for IT Management, Software Design and Architecture, Secure Infrastructure Design, Database Security Management, Professional Practice and Research Methodology, E-Commerce and Security

University of Energy and Natural Resources, MPhil in Computer Science, GPA: 3.26, Sunyani, Ghana Jan 2022 – Aug 2024

- Courses: Programming Languages, Operating Systems, Advanced Operation Research, Database Systems, Computer Science Research Methodology, Advanced Data Structures and Algorithm, Computer Architecture, Software Engineering, Theory of Computation, Data Communications and Networks, Machine Learning, Energy Systems Modelling
- Thesis: *Automatic Number Plate Recognition Using YOLOV8* (successfully defended)

University of Energy and Natural Resources, BSc in Computer Science, Second Class Honors, Sunyani, Ghana Sep 2017 – Aug 2021

- Courses: Advanced Database Systems, Principles of Programming, C++ , Java, VB.NET, Internet Computing, Artificial Intelligence, E-Commerce, Mobile Application Development, Software Engineering
- Final Project: *University Estate Management System*

Teaching Experience

Lecturer in Computer Science, Kessben University College, Kumasi, Ghana Sep 2025 – Present

- Delivered core undergraduate courses to 40–80 students per semester: Object-Oriented Programming (Java & C++), Data Structures and Algorithms I, Introduction to Artificial Intelligence, Digital Logic Design, Introduction to Digital Electronics, and Programming with Python
- Designed curricula incorporating hands-on labs, real-world projects, and AI concepts to boost practical skills and student engagement
- Mentored 50+ students on capstone projects and career paths, promoting industry best practices in software development and emerging technologies
- Evaluated assignments, exams, and projects with detailed feedback to support strong academic performance

Graduate Teaching Assistant, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana Jan 2025 – Present

- Led tutorials and practical sessions for Introduction to Computing and Microsoft Excel courses (cohorts of 1000+ students), delivering interactive content on foundational computing principles
- Created, administered, and graded assessments to reinforce concepts and develop problem-solving abilities
- Worked with faculty to update materials in line with current industry and academic standards

Coding Instructor, AMFEX Training Hub, Sunyani, Ghana Jan 2023 – Aug 2023

- Conducted interactive workshops on Python, HTML/CSS, JavaScript, and React for diverse learners, building

proficiency from beginner to intermediate levels

- Customized curricula and guided project-based learning to enhance technical skills and real-world application

Professional Experience

Software Engineer, Trinity Software Centre, Kumasi, Ghana May 2024 – Present

- Developed full-stack web applications using PHP, JavaScript, MySQL, and related frameworks, delivering scalable and performant solutions
- Crafted user-friendly interfaces to optimize workflows and improve overall user satisfaction
- Collaborated with teams on requirements gathering, feature implementation, and timely deployments

IT Personnel, University of Energy and Natural Resources, Sunyani, Ghana Sep 2023 – Dec 2024

- Monitored and troubleshoot network infrastructure and systems to maintain high reliability for university operations
- Produced graphics, flyers, and digital content for institutional publications and online outreach

IT Personnel (National Service), University of Energy and Natural Resources, Sunyani, Ghana Sep 2021 – Dec 2022

- Managed campus network and computer systems, providing essential technical support for seamless daily use
- Contributed to university branding through visual and digital content creation

Additional Roles

Name Reference List Officer, Electoral Commission of Ghana (EC-Bantama), Kumasi, Ghana Dec 2024

- Verified voter reference lists for accuracy and supported efficient electoral processes
- Coordinated with teams to assist voters and manage vote counting

Internet Café Attendant, Olarzu Internet Café & Business Centre, Sunyani, Ghana Jun 2019 – Sep 2019

- Delivered technical support, customer service, and managed operations (printing, scanning, internet access)

Conference Presentations

Automatic Number Plate Recognition Aug 2023

The Maiden International Conference on Science, Technology and Health Innovation for Sustainable Development (STHISD), Sunyani, Ghana

Public Publications

Automatic Number Plate Recognition 2023

Asamoah, Jeffrey, Appiah, Obed, Nyarko Boateng, Owusu, Adu, Kwabena
Mendeley Data, V2, 10.17632/74zz6dj9vn.2

Projects

University Management System github.com/Jeffrey1999/UMIS

- Developed a web-based system using PHP, MySQL, jQuery, and JavaScript

UENR Maiden Homecoming 2021

- Designed flyers and promotional content

E-Commerce Application for Customized Lifestyle Ongoing

- Developing a web-based application

Research

Pothole Detection in Ghana Using Deep Learning Ongoing

- Co-authored with Emmanuel Akwah Kyei

- Exploring Vision Transformer (ViT) adaptations and hybrid YOLO-Transformer architectures for robust pothole detection in Ghanaian road conditions, addressing challenges like variable lighting, diverse textures, and real-time performance on edge devices

Certifications

Routing and Switching Protocols, Huawei Certification

- Certificate No.: 010100101808438091010679

Internships

Android Training, University of Energy and Natural Resources, Sunyani, Ghana

- Completed one-month training using Java and Kotlin

Skills

Technical Skills: Python, PyTorch, Vision Transformers (ViTs), YOLO, Computer Vision, Deep Learning, OpenCV, PHP, JavaScript, C++, Java, MySQL, Data Structures & Algorithms

Soft Skills: Effective Time Management, Communication, Teamwork, Problem-Solving, Adaptability

References

Dr. Kwabena Adu, Senior Lecturer

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