

ADWOA ASANTEWAA BREMANG

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EDUCATION

Carnegie Mellon University Africa (CMU-Africa)

MSc. Electrical and Computer Engineering

Kigali, Rwanda

May 2021

Ashesi University

BSc. Electrical Engineering (Magna Cum Laude)

Eastern Region, Ghana

Jun 2019

AWARDS

Full Scholarship Recipient, Mastercard Foundation – Carnegie Mellon University Africa

Aug 2019

PROFESSIONAL EXPERIENCE

Ashesi University

Accra, Ghana

Research Support Staff – Computer Science Department

January 2024 – Present

- Developing TWI and accented English speech-to-text models to assist students with their final projects.
- Contributed to creating a grammar error correction model for Zarma, a low-resource language.
- Supervised a student capstone project, providing guidance, critical feedback, and support for research in human activity recognition using cameras. The student group won the award for Best Group Project.

Data Scientist – Ashesi E-learning

April 2022 – Feb 2024

- Built an NLP speech-to-text model that surpassed Google's speech-to-text on an African-accented dataset by approximately 30% word error rate.
- Led a team of over 100 contributors to develop a 40-hour dataset of African-accented English.

Carnegie Mellon University Africa

Kigali, Rwanda

Sep 2020 – Aug 2021

Teaching Assistant

Course - Orientation Programming Session

- Trained over 100 students in Java and Linux programming; analyzed performance to determine essential foundational courses.
- Provided personalized support during office hours to address individual weaknesses, significantly boosting student confidence in programming.

Course - Fundamentals of Telecommunication and Computer Networks

- Collaborated with faculty to set quiz questions, assignments, recitations, and office hours as part of my core responsibilities
- Increased students' participation in course discussions by adapting interactive methods of teaching, which strengthened their communication and presentation skills.
- Introduced students to the 'Wireshark Network Protocol Analyzer' software toolkit, which equipped them with technical skills.

PROJECT & RESEARCH EXPERIENCE

Solid Rock Foundation, Educational Project

Accra, Ghana

Software Engineer – Educational institution data management

October 2023 - present

- Developed a Python-based data analysis tool that generated terminal reports for approximately 100 elementary and high school students for over a year.
- Created a tool to digitize the report generation system, enabling teachers to prioritize time on student support.
- Quantified school performance data, assisting the administration in monitoring student and teacher progress each semester.

Datagon Studio, API development Project

Accra, Ghana

Consultant – Computational API

March 2024 - Present

- Developed a computational API for assessing educational institutions for an educational consulting firm.
- Translated Excel-based computational processes into a Flask API using Python and Google Cloud Platform.

Preprint, Grammatical Error Correction for Low-Resource Languages: The Case of Zarma

October 2024

Available on arXiv: <https://arxiv.org/pdf/2410.15539.pdf>

LEADERSHIP EXPERIENCE

Academic Committee, Carnegie Mellon University

Kigali, Rwanda

Executive Member

Aug 2019 – Dec 2020

- Co-led a plagiarism awareness campaign that exposed students to the various types of plagiarism and mitigation strategies
- Facilitated the organization of information sessions for freshmen with research students across Networks and Energy topics

EnhanceMind AI Conference 2025, AI Conference

Dar es Salam, Tanzania

Keynote Speaker

September 2025

- Delivered a virtual talk on *Applications of NLP*, highlighting the evolution of NLP and Africa's role in its future development.

Deep learning Indaba, IndabaX Ghana 2025

Berekuso, Ghana

Tutorial facilitator

June 2025

- Co-facilitated a tutorial on "Foundational NLP: Pretraining and Key Concepts" at IndabaX Ghana to a crowd of 10+ participants

SKILLS & INTERESTS

Technical Skills: Artificial Intelligence, Data Science, Embedded Systems, Programming, IoT, Research **Tools:** Programming: C++, Java, Linux, NumPy, Python, Google Cloud Platform, PyTorch **Interests:** Community Service, Machine Learning