

JOEL OSEI-ASAMOAH

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EDUCATION

Ashesi University BSc. Computer Engineering Cumulative GPA: 3.72 /4.00	Berekuso, Eastern Region Date of Graduation: Aug 2024
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ACHIEVEMENTS/AWARDS

Magna Cum Laude Honors , Ashesi University	2024
Deans List , Ashesi University	2021 - 2024
Ashesi Health Initiative Participant , Africa Higher Education Health Collaborative	2024 - 2025

WORK EXPERIENCE

Department of Engineering – Ashesi University, Berekuso Teaching Assistant	Sept 2024 – present
TRACE Co-Founder	Feb 2024 – present
<ul style="list-style-type: none">Developed a fully mechanical math graphing device to assist blind and visually impaired students in plotting bar graphs, significantly improving their ability to engage with mathematical concepts.Collaborated with schools in Cape Coast, Accra, and Wa to test and receive feedback on the device, to make it an effective tool for visually impaired students.Developed and reviewed team budgets which secured approval from the Ashesi Health Initiative to fund the project, enabling further development and testing of the device.	

Ashesi Innovation Experience (AIX) – Ashesi University, Berekuso Program Assistant (Robotics)	June 2025 – Aug 2025
<ul style="list-style-type: none">Trained Robotics coaches on the VEX V5 kit through one-on-one sessions and lectures, enhancing their technical expertise.Designed and implemented the Escape Room Challenge, creating the mat layout and programming communication between robots, a central VEX brain and a custom website.Assisted the faculty lead in teaching robotics by preparing learning materials, answering student questions, and guiding participants through hands-on activities.	

PROJECTS AND RESEARCH

Recognition of Walking Terrain Using Embedded ML Developer	Jan 2024 – Present
<ul style="list-style-type: none">Built a machine learning model to classify walking terrain, which can improve the accuracy of calorie burn estimation, providing users with more reliable fitness data.Deployed the ML model on an Arduino Nano 33 BLE to reduce communication latency, delivering quicker and more responsive fitness data to users.Prototyped a low-fidelity fitness band housing the ML model, enabling user testing and feedback on functionality and usability.	

PUBLICATIONS AND PRESENTATIONS

J. Osei-Asamoah and **N. Amanquah**, "Recognition of Walking Terrain Using Machine Learning," 2024 IEEE 9th International Conference on Adaptive Science and Technology (ICAST), Accra, Ghana, 2024, pp. 1-6, doi: 10.1109/ICAST61769.2024.10856487.

CO-CURRICULAR ACTIVITIES

Ashesi University , Automations, Control and Robotics Lab Member	Jan 2023 – May 2025
<ul style="list-style-type: none">Contributed to the perception and controls sub-teams for the F1Tenth Autonomous Racing Competition; the team placed 3rd in qualifying and 7th overall.	
Practical Education Network (PEN) Content Creator	Feb 2024 – Jan 2025

SKILLS

- **Programming Languages:** Python, C/C++, Java
- **Operating Systems & Tools:** Ubuntu, Git, Docker
- **Robotics & Simulations:** ROS 2, Gazebo
- **Hardware Platforms:** Arduino, Raspberry Pi, ESP32
- **Design & Modelling:** CAD, MATLAB