

# Akanfah Ishmael

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## SUMMARY

I am a final-year electrical and electronic engineering student with a strong interest in energy systems, automation and industrial operations. Through academic work, real-world projects and internships, I have developed a practical mindset and a passion for solving problems through design and innovation.

## EDUCATION

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### University of Mines and Technology (UMaT), Tarkwa BSc. Electrical and Electronic Engineering

*Expected Graduation: September 2025*  
Academic Standing: First Class

### St. James Seminary and Senior High School General Science | Completed 2021

## PROJECTS

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### IoT-Enabled Knee-Mounted Animal Movement Tracking and Restriction System

- Designed and implemented a dual-device system using GPS, LoRa, and microcontrollers to track and control livestock movement.
- Developed an embedded system with environmental monitoring and motor-triggered response mechanisms.

### Public Transport Image Classification System; Computer vision project

- Built a computer vision system using transfer learning (CNN) to classify tro-tros, taxis, and buses for urban transport analysis in Ghana.
- Integrated model deployment using a lightweight web/mobile interface for real-time use.

## TECHNICAL EXPERIENCE

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### Electricity Company of Ghana (ECG), Tarkwa Intern | Sept 2024 – Nov 2024

#### Maintenance Team

- Participated in routine inspection and servicing of distribution transformers and low-voltage lines.
- Observed load balancing practices and supported periodic network maintenance activities.

#### Fault Team

- Assisted in underground cable fault detection using fault locators and megger testing.

- Participated in cable jointing and termination under supervision.
- Learned fault isolation procedures and switching operations in emergency response scenarios.

### **BSP (Bulk Supply Point) Substation**

- Supported substation technicians in daily equipment checks and logging operational parameters.
- Gained exposure to feeder switching, and metering system configurations.

## **494 Engineering Works Troops, Ghana Armed Forces, Sunyani**

*Intern | Oct 2023 – Dec 2023*

- Worked on underground electrical distribution systems and equipment maintenance.
- Gained practical experience in power layouts, load balancing, and operational safety in a military environment.
- Supported wiring, lighting, and backup power installations in military facilities.

## **LEADERSHIP & VOLUNTEER EXPERIENCE**

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### **Aaenics Robotics Community, UMaT**

*Tutor and Public Relations Officer*

- Trained students on robotics, microcontroller programming (Arduino, ESP32), and circuit design.
- Organized workshops and hands-on sessions, building a vibrant community of young innovators.
- Represented the community during tech events and institutional engagements.

## **PROFESSIONAL DEVELOPMENT**

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- PLC Automation for Industrial Control and Process Optimization
- Data Science & Machine Learning for Predictive Maintenance and Process Intelligence

## **SKILLS**

**Engineering:** Power system troubleshooting, Circuit design, Embedded systems

**Programming & Tools:** Python, MATLAB, C++, Simulink, SolidWorks, Proteus, AI and Machine learning

**Soft Skills:** Communication, Teamwork, Creativity, Technical Writing

**Languages:** Fluent in English

## **REFEREES**

### **Mr Theophilus Adjartey Tetteh**

Foreman; Electricity Company of Ghana (ECG), Tarkwa District

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### **Mr Kwaku Effah Adu-Ampomah**

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