DANIEL AMOAKO FRIMPONG

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EDUCATION

University of Southern California   Los Angeles, California
MSc. Computer Science   August 2024-May 2026
Relevant coursework: Databases, Analysis of Algorithms, Machine Learning, Autonomous Cyber-
Physical systems, Web technologies

Ghana Communication Technology University   Accra, Ghana
Bachelor of science in Information Technology   January 2018-October 2021
- GPA: 3.68

TECHNICAL SKILLS

Python, JavaScript, C++, HTML, CSS, Swift, Typescript React, Node.js, Bootstrap, Tailwind, Angular,
Git, GitHub, Edge-Impulse, Azure, MongoDB.

PROFESSIONAL EXPERIENCE

Coderina Edtech Foundation   Accra, Ghana
Lead Robotics Trainer   June 2020-April 2024
- Taught robotics, programming, and embedded systems to students from 50+ high schools across 5 regions in Ghana using VEX, LEGO EV3, and Arduino kits.

Cadi Media   Accra, Ghana
Frontend Web Developer   June 2020-April 2024
- Built websites using **HTML, CSS, React.js**, and **Node.js** for both mobile and desktop platforms
- Increased client service efficiency by 10% through a client feedback system leveraging google forms and zoom
- Created and implemented over 20 **react components** for frontend-based projects

The Makersplace   Accra, Ghana
STEM Facilitator   October 2022-January 2024
- Reviewed **TinyML** implementations for smart agriculture leveraging **Raspberry Pi Pico** and **Edge-Impulse** to maximize crop yields by more than 10%
- Created a robotics coaching curriculum for Lego, Rev and Vex robotics kits, leading a Makerspace team to first place at a national robotics competition
- Guided students to implement problem-solving techniques to increase agricultural water usage efficiency in Ghana by 5%

PROJECTS

Prime Engine   January 2025
- Developed a C++ **physics engine** that enabled accurate **collision detection, realistic mass** and **gravity effects,** with **debugging visualizations.**
- Built an **efficient rendering function** that displays objects within the camera's view, optimizing performance

Weather Application   September 2024
- Developed and deployed two weather applications: a **Swift-based mobile app** and an **Angular** web app.
- Designed and implemented a **Node.js** backend with **MongoDB** to store and manage weather data for saved locations.
- Hosted the web application on **Microsoft Azure** for scalable and reliable deployment.

GSM-Based Arduino Farm Monitoring System,   January 2022
- Developed a comprehensive remote farm management solution deploying **Arduino**, GSM, and sensors to deliver real-time soil moisture, temperature, humidity, and NPK data
- Addressed challenge of remote farm monitoring in rural areas in Ghana by developing a practical and efficient solution employing GSM and SMS functionality instead of Internet

LEADERSHIP AND INVOLVEMENT

MTN Foundation,   Aburi, Ghana
MTN Yello Care Volunteer   May 2024-June 2024
- Facilitated workshops on 3D printing, Physical computing using Arduino and Raspberry Pi, empowering teachers and students with hands-on experience and knowledge
- Constructed a **smart borehole,** improving access to water and control over water supply for staff and students of Aburi Senior High Technical School.