

Ferka Michael

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Education

2020-2024

**Kwame Nkrumah University of Science and Technology,
Kumasi**
BSc. Computer Engineering

2016-2019

Nafana Presbyterian Senior High School, Sampa
General Science

Relevant Coursework

- Software Engineering
 - Programming and Problem Solving
 - Data Structures and Algorithms
 - Object Oriented Programming
 - Operating Systems
 - Database and Information Retrieval
 - Distributed Computing
 - Computer Networking
 - Artificial Intelligence
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Work Experience

Distributed IoT Platforms, Privacy and Edge-Intelligence Research (DIPPER) Lab, IoT Intern

- Developed IoT system for monitoring electrical energy generation and consumption in developing countries.

Fountain Care Hospital Limited, Network Administrator

- Worked as network administrator, troubleshooting and resolving network issues to ensure seamless communication and data transfer between medical devices, resulting in improved efficiency and patient care.

KNUST College of Engineering Innovation Lab,

- Worked as an intern collaborating with a team to design and develop a robotic arm and a smart dustbin using Arduino microcontroller, enabling automated tasks and improving waste management efficiency.

Skills

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- **Programming Languages:** Python, C, C++, PHP
 - **Web Technologies:** HTML, CSS, JavaScript, React.js, Node.js
 - **Database Management:** SQL, MySQL, PostgreSQL, Firebase, MongoDB
 - **Tools & Technologies:** Git, Docker
 - **Operating Systems:** Windows, Linux
 - Strong understanding of data structures and algorithms
 - Proficient in software development and debugging
 - Knowledge of network protocols and communication systems
 - Excellent problem-solving and critical-thinking skills
 - Familiar with computer hardware design and implementation
 - Strong knowledge in cloud computing
 - Strong interpersonal and communication skills
 - Experience with Machine Learning
 - Experience with embedded systems development
 - Experience with IoT solutions development

Projects

Weather Station and Data Harvester

- Developed a weather station using ESP8266, integrating MongoDB and Firebase for data storage and retrieval.
- Implemented real-time data updates and alerts using Firebase's real-time database features.
- Developed a web application to display weather data using React.js and Node.js

Fountain care hospital website

- Built a website from scratch using HTML, CSS, and JavaScript, creating a user-friendly interface for a hospital to showcase their services on the internet

Aquasense- Smart water tank filling system

- Developed a smart domestic and industrial tank filling system using the ATMEGA328P-PU microcontroller, ultrasonic sensor, water level sensor and relay
- Aquasense uses ultrasonic sensor and water sensor to monitor water levels in the tank and turn ON or OFF the relay according to the water level readings.

Automated Plant Watering System

- Developed an Arduino-based automated plant watering system using a capacitive moisture meter and solenoid valve to monitor soil moisture levels and provide water to plants as needed.

- Overcame challenges in sensor calibration, circuit design, and programming while gaining

Achievements

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- Recipient of TULLOW Scholarship in recognition of academic excellence and dedication.
 - Fourth position, Academic City University TECH Exhibition 2023 challenge, showcasing technical skills and problem-solving abilities in a competitive environment.

Voluntary Experience

- **Tech Trailblazers:** I organized a seminar to educate and mentor youth in Sampa on tech industry changes and opportunities
- **ABAN Center for Global Policy:** I volunteered in organizing a two-day seminar focused on educating young people about digitalization and sustainability
- **Christ Image Assembly Campus Movement:** I volunteered in organizing a conference to help young African youths develop leadership skills and change Africa's narrative