

EMMANUEL KAMANDA

ELECTRICAL AND ELECTRONIC ENGINEER

PROFILE

Innovative and results-driven Electrical and Electronic Engineer with a proven track record in AI/ML implementation, web development, software development, cybersecurity, and educational technology. As the Co-Founder and Technical Lead of Easy STEM SL, I have pioneered impactful AI-powered educational solutions like the Easy STEM Server with intelligent content recommendation systems and SenseBod, an AI-based platform featuring natural language processing and computer vision, empowering underserved communities with accessible, personalized educational tools. My tenure as Lead Software Developer at Africell Sierra Leone showcases expertise in deploying enterprise-scale AI solutions, including machine learning models for customer analytics, predictive maintenance algorithms for telecommunications infrastructure, and AI-driven network optimization systems that improved operational efficiency by 30%. I am dedicated to leveraging my technical expertise in artificial intelligence, machine learning, and data analytics alongside my leadership experience to drive innovation and create transformative, AI-powered solutions in the telecommunications, technology, and education sectors. My work demonstrates measurable impact through data-driven insights, with AI implementations reaching over 30,000 beneficiaries and achieving recognition from UNICEF and NSTIC.

WORK EXPERIENCE

● Easy STEM SL (Non-Profit Organization) MARCH 2022 - PRESENT Co-Founder and Technical Lead

- Co-developed and deployed the Easy STEM Server, providing offline access to educational resources for underserved communities, including over 30,000 beneficiaries.
- Integrated machine learning models for personalized learning pathways in the Digital Learning Hub in a Bag, enhancing access to STEM education in remote areas through adaptive content delivery.
- Led the technical development of SenseBod, an AI-based educational platform, recognized globally by UNICEF and NSTIC.
- Directed cross-functional technical teams to innovate, troubleshoot, and improve systems.
- Secured international awards, including the Generation Unlimited Challenge 2022, showcasing impactful educational technology solutions.

● Africell Sierra Leone MAY 2025 - PRESENT Lead Software Developer

- Led software development initiatives for major telecommunications provider, architecting AI-powered scalable solutions including intelligent network optimization algorithms and machine learning-based predictive maintenance systems for telecom infrastructure and customer-facing platforms.
- Managed full software development lifecycle delivering mission-critical applications with 99.9% system uptime for high-availability telecommunications environment
- Designed robust system architectures and APIs while implementing AI-enhanced security best practices including anomaly detection for fraud prevention, behavioral analytics for threat identification, and automated security incident response for sensitive telecommunications data and billing systems.
- Mentored development teams and collaborated with executive stakeholders to drive digital transformation initiatives supporting Sierra Leone's telecommunications sector

CONTACT

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EDUCATION

2018 - 2023

FOURAH BAY COLLEGE,
UNIVERSITY OF SIERRA LEONE

First Class B. ENG (Hons)
Electrical and Electronic
Engineering

SKILLS

- Web and App Development
- Python Django
- Big Data
- React Native
- Linux System
- 3D Printing
- PHP
- React JS
- Data Analysis
- MATLAB
- Embedded System
- Electronics Lab
- Drone Pilot

- Multisim
- Graphics Design
- Time Management
- Leadership
- Critical Thinking

SYSTEM DEPLOYED

- HR Management System
- International-phone-validator (JavaScript lib)
- Fast Food Restaurant System
- actb Bank Website
- IOT Base Circuit Breaker
- Smart WastBin Management System
- Vex Robotics

ACHIEVEMENTS

- Licensed Drone Pilot 2023
- Winner Pico CTF 2021
- Winner Generation Unlimited Challenge 2022
- 2nd Best Graduating Student, Electrical and Electronic Department 2023
- Tourism Hackathon by Sensi 2021

UNIPOD, Sierra Leone

MARCH 2024 - PRESENT

Prototype Lab Supervisor

- Supervised advanced fabrication laboratory operations with comprehensive equipment inventory including FDM/SLA 3D printers, CNC machines, and laser cutters, maintaining 70% utilization rate
- Designed and implemented 4-level user certification program serving 150+ participants annually, achieving 95% training completion and 60% user advancement rates
- Led strategic project management for flagship initiatives ranging from portable accessories to custom prosthetic limbs, maintaining 90% project completion rate
- Established quality control standards with $\pm 0.2\text{mm}$ dimensional accuracy requirements and maintained safety incident rate below 2 per 1000 operating hours

STEAD Society

2019 - 2025

Chief Technology Officer

- Build and test application
- Analyse and review existing technology and systems for improvement
- Build and oversee applications, data, and security strategy
- Developing and implementing data protection and quality assurance processes
- Deciding on a new technology to build a new application

Kamara Yokie Innovation Center

JANUARY 2023 - MAY 2024

Innovation Specialist

- Spearhead the development and implementation of innovative projects and initiatives aimed at fostering technological advancements within the community.
- Collaborate with cross-functional teams to identify emerging trends, technologies, and opportunities for innovation.
- Conduct thorough research and analysis to support the ideation and development of new products and services.

Easy Solar

OCTOBER 2022 - FEBRUARY 2024

DevOps Engineer Intern

- Implement integrations requested by internal and external departments
- Maintaining the deployment pipelines and the running system in a secure, stable, and easy-to-use way
- Automating Task

Engineering Society, FBC

SEPTEMBER 2022 - NOVEMBER 2024

President

- Provided visionary leadership and strategic direction for the Engineering Society, guiding its growth and development.
- Represented the society at official functions, events, and meetings with stakeholders, ensuring a strong and positive presence.
- Coordinated and oversaw the planning, organization, and execution of society events, including workshops, seminars, competitions, and social activities.
- Fostered a collaborative and inclusive environment within the society, encouraging active participation and engagement from all members.
- Managed the society's executive committee, delegating tasks and responsibilities to ensure smooth operations and effective teamwork.

HOBBIES AND INTERESTS

- Robotics
- Technology
- Teaching and Mentorship
- Innovation
- Music Production
- Community Involvement
- Video Game
- 3D Printing
- Drone Technology
- Traveling

VOLUNTEERING EXPERIENCE

Robotics Coach and Mentor

MAY 2024 AND MAY 2025

Vex IQ, Dallas, Texas

- Supported student teams in preparing for and participating in the Vex IQ robotics competition.
- Provided technical advice and troubleshooting assistance to ensure teams' robots met competition standards.
- Conducted training sessions on various aspects of robotics, including design, programming, and strategy.
- Fostered a positive and motivating environment for students, promoting confidence and skill development.

Field Resetter

APRIL 2024 AND MAY 2025

VexU Competition, Dallas, Texas

- Efficiently reset the competition field between matches, ensuring all game elements are in their correct positions.
- Worked closely with the competition organizers and referees to maintain smooth and timely transitions between matches.
- Assisted in setting up and breaking down the field before and after the competition.
- Ensured compliance with VexU competition standards and safety protocols during field resetting.

Robotics Coach and Mentor

OCTOBER 2023

First Global 2023, Singapore, 2024, Greece and 2025 Panama

- Led the technology strategy and operations for the Engineering Society, ensuring alignment with organizational goals and objectives.
- Managed and oversaw the development, implementation, and maintenance of technology systems and infrastructure.
- Coordinated with various committees and teams to integrate technology solutions that enhanced the society's activities and events.
- Conducted technology assessments and provided recommendations for improvements and upgrades.
- Supervised a team of technical volunteers, providing guidance and support to ensure successful project execution.

Volunteer

JUNE 2022

The Sierra Leone Institution of Engineers (SLIE)

Biennial Conference 2022

- Assisted in the planning and coordination of the biennial conference, ensuring all logistical aspects were handled efficiently.
- Provided support to conference attendees, including registration assistance, information dissemination, and guidance throughout the event.
- Helped set up and manage conference venues, ensuring that all technical and audio-visual equipment was properly configured and functional.
- Coordinated with speakers and presenters to ensure their needs were met and their sessions ran smoothly.

REFERENCE

Available upon request