

SHARON NJUGUNA

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PROFESSIONAL PROFILE

Embedded Systems developer with a background in Microprocessor Technology and Instrumentation complemented by cloud-platforms expertise and IoT development. I am skilled in embedded programming with Rust and C++, and in building real-time embedded applications using FreeRTOS. I am able to read datasheets and technical documentation to understand how components work and how best to use them in a system. I am also familiar with safety-focused development methods and documentation processes used in critical environments. I work well in fast-paced teams, and I'm passionate about building systems that are both reliable and useful in real-world settings.

EDUCATION AND QUALIFICATIONS

University of Nairobi, Faculty of Science and Technology

Sep 2021 - Sep 2025

Bachelor of Science in Microprocessor Technology and Instrumentation

Co-curriculum activities

- Webmaster of IEEE, WIE, University of Nairobi Student Branch
- Member of Google Student Developer Club
- Member of University of Nairobi Microprocessor Technology Association (UNMTA)

WORK EXPERIENCE

Research Intern

University of Nairobi, Physics Department

July 2022 - October 2022

- Collaborated on a research project addressing fuel adulteration detection using sensor technology.
- Assisted in data collection, 3D prototype design, and scientific analysis, gaining practical experience in experimental techniques and technical reporting.

RELEVANT SHORT COURSES

AWS Certified Cloud Practitioner

February

2025 - May 2025

AWS re/Start Program

- Completed full-time, classroom based skills development and training program on IT fundamentals, AWS Cloud, and professional skills.
- Built IT fundamental skills, including: working knowledge of Linux OS, writing scripts in Python and Shell.
- Learned how to apply core AWS services in the areas of compute, storage and networking; including EC2, S3, IAM, VPC, Lambda, Cloud Formation, RDS and Route 53.
- Demonstrated strong verbal and written communication skills, including the ability to explain technical information and terminology to non-technical end users.

IoT Workshop

September 2024 - Dec 2024

ALX Africa

- Gained hands-on experience in Internet of Things concepts, including sensor integration, data communication, and IoT platform development.
- Developed practical skills in connecting and managing IoT devices, with applications in data collection and analysis.

SKILLS AND COMPETENCY

- **Technical Skills:** AI Tools, C#, C++, Python, FreeCAD, Vtools, Git, GitLab CI/CD, Arduino, AWS (EC2/S3/Lambda), Linux/Bash, FreeRTOS, Renode,
- **Technical documentation:** LaTeX, MS Office, LibreOffice, Confluence
- **Graphic Design:** Adobe Photoshop, Canva
- **PCB Development Software:** Altium, KiCAD, Proteus, Inkscape (for vector trace)
- **Soft skills:** Team collaboration using Git and version control best practices
- **Languages:** English (Native), Swahili

VOLUNTEER EXPERIENCE

IEEE Women In Engineering Student Branch Webmaster

August, 2024 – Present

University of Nairobi Student Branch

- Maintain and update web content, ensuring accuracy, relevance and alignment with IEEE branding standards.
- Develop and execute targeted marketing campaigns to promote events, workshops, and membership growth.
- Collaborate with executive teams to enhance online presence and streamline communication across digital channels and platforms.

St. John Ambulance Cadet - Kenya, Nairobi

May 2019 - April 2021

- Trained in first aid simulation and provision, gaining practical life-saving skills and participating in first aid competitions, which helped build teamwork, quick decision-making, and problem-solving abilities.