

Sharon Ngetich

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Profile

Analytical and mission-driven Control & Instrumentation Engineer with strong expertise in maintenance, process automation, and instrumentation systems. Skilled in preventive and corrective maintenance, troubleshooting, and process optimization across manufacturing and energy systems. Adept at transforming operational data into verifiable insights that enhance system reliability and sustainability — a foundation ideal for Monitoring, Reporting & Verification (MRV) and maintenance data frameworks. Currently expanding expertise in AWS Cloud Computing and IoT for digital monitoring and maintenance systems.

Education

Jomo Kenyatta University of Agriculture & Technology (JKUAT)

BSc. Control & Instrumentation Engineering — Second Class Upper (2020–2024)

Amazon Web Services (AWS)

Cloud Computing — Ongoing (Sept 2025 – Present)

Professional Experience

Maintenance Technician – Glacier Products Ltd (Dairyland) (Sept 2024 – Sept 2025)

- Conducted mechanical, electrical, and instrumentation maintenance for production and refrigeration systems.
- Implemented and troubleshot PID control systems to enhance process reliability.
- Monitored and analyzed KPIs (MTTR, MTBF, availability) to improve maintenance strategies.
- Led root cause analysis (RCA) and Operational Excellence (OpEx) initiatives to reduce downtime.
- Ensured compliance with QMS, FSMS, and OSHA standards while optimizing maintenance schedules.

Industrial Systems Instrumentation & Automation (ISA) Training (Jul 2024 – Sept 2024)

- Programmed Siemens S7-1200 PLCs using TIA Portal for industrial automation projects.
- Designed and wired control panels integrating sensors and actuators for real-time monitoring.
- Applied process logic design and troubleshooting to improve automation system performance.

Instrumentation Intern – Kenya Electricity Generating Company (KenGen) (May – Jul 2022)

- Calibrated and verified pressure, temperature, and level transmitters using HART communicators.
- Documented calibration records ensuring traceable data integrity.
- Conducted loop checks and assisted with instrumentation maintenance in geothermal systems.

Projects

- Lifecycle Data Monitoring Dashboard – Built Excel dashboard for maintenance KPIs (MTTR, MTBF).
- Smart Farm IoT Monitoring System – Developed ESP32 IoT system using Blynk for remote environmental monitoring.
- STM32 32-Relay Control System (FreeRTOS + Modbus RTU/TCP) – Designed a 32-relay

STM32 controller with Modbus TCP/RTU and FreeRTOS multitasking.

- Automated Water Transfer System (PLC/HMI) – Programmed Siemens PLC for automated control.
- PID Integration Using Thermocouple Instead of RTD – Adapted PID control using thermocouple sensors.
- AutoCAD Design – Created optimized chiller and cold room floor plans.

Technical Skills

- Maintenance & Reliability: Preventive Maintenance, RCA, KPI Tracking, Equipment Diagnostics
- Automation & Control: PLC, SCADA, HMI (TIA Portal V18), PID Integration
- Embedded Systems: STM32, FreeRTOS, Modbus RTU/TCP
- MRV & Maintenance Data: Monitoring, Reporting, and Verification Systems, Data Traceability, Lifecycle Analysis, Performance Monitoring
- Programming: Python, C++, MATLAB, Simulink
- IoT & Cloud: AWS (in progress), ESP32, Blynk, Sensor Networking
- Data Tools: Excel Analytics, RCA Reporting, Dashboard Design
- Compliance: OSHA, FSMS, QMS

Soft Skills

Analytical Thinking | Technical Writing | Collaboration | Problem-Solving | Communication | Time Management

References

Available upon request