Sharon Chepngeno Ngetich
Control and Instrumentation Engineer

Contact

Location: Nairobi, Kenya

Email: sharonngetich409@gmail.com

Phone: 0798 555 472

LinkedIn | Portfolio

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, Embedded system and IoT for digital monitoring and Control & Instrumentation, Electrical, Mechanical and HVAC systems.

Education

Amazon Web Services (AWS) (Sept 2025 – Nov 2025)

Cloud Computing – Cloud Practitioner Certification

Jomo Kenyatta University of Agriculture & Technology (JKUAT) (Sept2020–Apr2024)

BSc. Control & Instrumentation Engineering - Second Class Upper

AIC Litein Girls High School (Feb 2016 – Nov 2019)

Secondary School Education - KCSE B+

Chumo Educational Centre (2012 – 2015)

Primary School Education – KCPE 392/500

Professional Experience

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

• Conducted mechanical, electrical, HVAC and instrumentation maintenance for production and refrigeration systems.

• Implemented and troubleshot PID and PLC 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 and HMI using TIA Portal for industrial automation projects.

• Designed and wired control panels integrating sensors and actuators for real-time monitoring.

• Applied process logic design, P&ID and PFD interpretation 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 store inventory records ensuring traceable data integrity.
• Conducted loop checks, troubleshooting, installation, repair and assisted with instrumentation maintenance in geothermal systems.
• Used Meggar meter for insulation test.

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

• **Engineering Fields & Systems:** Control & Instrumentation| Mechanical| Electrical| HVAC

• **Sensors:** Pressure| Temperature| Flow| Level

• **Maintenance & Reliability**: Preventive & Corrective Maintenance |RCA|KPI Tracking| Equipment Diagnostics| MTTR, MTBF & MTTF
• **Automation & Control**: PLC|DCS|SCADA| HMI| PID|VFD
• **Embedded Systems**: STM32|ESP32|Raspberry Pi| FreeRTOS | Modbus RTU/TCP
• **MRV** : Monitoring| Reporting and Verification Systems| Data Traceability| Lifecycle Analysis| Performance Monitoring

• **IoT & Cloud**: AWS Cloud Computing | ESP32 |Arduino uno & nano| Blynk| Sensor Networking
• **Data Analysis**: Excel PPT| Analytics| RCA |Tacking & Reporting| Dashboard Design
• **Compliance**: OSHA| FSMS| QMS| LOTO
• **Programming**: Python| C++| MATLAB| Bash scripting| Linux| SQL
• **Software**: MATLAB| Simulink| Proteus| TIA Portal|STM32CubeIDE| AutoCAD

Soft Skills

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

References

Available upon requests