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Stacy Kibarak

Embedded Systems Engineer

Resourceful engineer with comprehensive skills in electrical engineering, robotics, programming, embedded systems, and the Internet of Things (IoT). Proven ability to plan, design and implement innovative solutions to solve real-world challenges while promoting sustainable development. Committed to continuous learning, professional growth, and mentorship within the tech community. Experienced in problem-solving, leadership, project management, and teamwork to deliver value, drive results and contribute to a more sustainable future.

SKILLS

Robotics, IoT, c++, Embedded C, PCB design, Python, Electrical installation, Excel, Software development, Electrical Maintenance, Networking, Communication skills, Team work.

WORK HISTORY

Engineering for Change LLC, Remote – *Embedded Systems Engineer*

MAY 2024 – OCTOBER 2024

- Engineered a sensor-driven silk yarn measurement system, optimizing production accuracy and enabling fair-trade verification for artisan weavers.
- Designed end-to-end hardware: developed firmware, created PCB layouts, and modeled CAD enclosures for scalable field deployment.
- Collaborated with the CEO Resham Sutra Ltd and the E4C team to align product development with UN Sustainable Development Goals and social impact objectives of increasing income for women weavers in rural India.
- Conducted prototype testing, troubleshooting, and iteration cycles under real-world conditions to ensure reliability and longevity in low-resource environments.

Coca-Cola Beverages Africa, Nairobi – *Packaging Engineer Intern*

Feb 2024 – MAY 2024

- Performed preventive and corrective maintenance on production lines 6, 7, and 8, ensuring minimal downtime and smooth operations.
- Updated and maintained daily Key Performance Indicator (KPI) boards for three lines to support data-driven decision-making.

Arc Ride, Nairobi – *Battery As a Service Engineer*

JAN 2024 – FEB 2024

- Upgraded 70 battery units to dual-capacity packs daily for electric bikes, extending range and supporting clean mobility solutions.
- Implemented a streamlined maintenance schedule, optimizing resource allocation and decreasing maintenance time by 20%.

Kenya Breweries Limited, Nairobi – *Manufacturing Excellence Intern*

FEB 2023 – MAY 2023

- Managed daily updates of key production KPIs on maturity boards to monitor performance and drive operational excellence.
- Coordinated and facilitated training sessions for staff across five departments, improving awareness of manufacturing best practices.

Gearbox, Nairobi – *Electrical & Electronics Intern*

JAN 2022 – FEB 2023

- Designed and fabricated up to eight custom Printed Circuit Boards (PCBs) per week to meet project requirements and client specifications.
- Performed electrical installations, wiring, repair, and maintenance for various equipment and systems, ensuring safe and reliable operations.
- Assisted in troubleshooting electronic circuits and embedded systems, improving functionality and supporting timely project delivery.
- Collaborated with engineers and technicians to test, assemble, and commission prototypes for industrial and educational projects.

EDUCATION

Jomo Kenyatta University of Agriculture and Technology, Kenya – *BSC.Electronics and Computer Engineering*

SEPT 2019 – JUNE 2025, MAIN CAMPUS

PROJECTS

- Designed a wearable fetal & maternal vitals monitor with web integration built for early detection, maternal engagement and saving lives.
- Developed a fully automated smart home controllable via Google Home for ensuring sustainable and safe homes.
- In a team of four Designed and implemented a pick-and-place robot that can be used in industry using Arduino, Raspberry Pi and ESP.
- Created a system for monitoring heart rate and oxygen levels remotely by patients who need remote medical care.
- Prototyped an accident prevention system integrating real-time alcohol detection and speed regulation, preventing 90% of test collisions within a controlled environment.

VOLUNTEERING AND LEADERSHIP

- Vice Chair, IEEE JKUAT Student Branch. 2023–2025
- Peer Mentor, Society of Engineering Students. 2022– 2025
- Mentor, Technovation Girls – guided teams in app development. 2022–2023
- Mentee, KamiLimu Cohort 7 (Cybersecurity, public speaking). 2022–2023

AWARDS AND CERTIFICATIONS

- Mama Care, Winner- Hult Prize Qualifiers 2025 (JKUAT).
- Introduction to Engineering for Global Development – E4C
- Introduction to Cyber Security- Cisco.