

SONIA IMORGAN MUTUMA

Imorgansonia@gmail.com

0758-721 337

I am a 23-year-old senior student at the University of Eastern Africa, Baraton, pursuing a Bachelor's Degree in Electronics Engineering. Baraton is a highly renowned University for applied sciences in East Africa. I have now successfully completed all course work of the four years of studies and will graduate "First Class", meaning among the highest achievers in my year group.

As a last step before graduating, I am finalizing my Senior Project. My project includes the development of an innovative device that measures water quality. The device is controlled via an app, which I am also developing. The project is my own invention and it involves both hardware construction and software development.

I am a hardworking, reliable lady, seeking an internship opportunity. During my internship, I would like exposure to innovative technological solutions working in a team. I have a driving license class B. I have also obtained skills in software such as Python and JavaScript. Among the extra-curricular activities during my university studies, I was the photographer for the University Yearbook. And I also organized debates for the Technology Department on for example Green Technology and Sustainable Development in Robotics and Automation.

Thank you for reading my resume, I am very eager to apply and expand my knowledge and skills through hands on experience and contribute to global sustainability efforts.

WORK EXPERIENCE

Lab Assistant UNIVERSITY OF EASTERN AFRICA, BARATON (TECHNICAL LAB)

Conducted circuit simulations and analysis to optimize performance and ensure compliance with industry standards. Assisted professors in laboratory sessions, troubleshooting circuits, and guiding other course students during laboratory sessions.

Did test and validations on electronic system, identifying and resolving any issues.

Repaired the lab equipment that were damaged during laboratory sessions.

Working as a sound engineer at the school church

Ensured the church service was conducted well and the sound for our online and physical viewers was at quality performance. By regulating the gain volume and ensuring no feedback was received from the microphones.

Assistant Technical Engineer at GERMAN SCHOOL NAIROBI

As an electronics technician for my third-year practicum, 8 weeks with certificate. (Remaining 4 weeks practicum at the University)

Dealt with underground and overhead PVC trucking while installing an electric bell at a position where every student can hear without exception and excuse, 12 FT high.

Dealt with repairs of electronic appliances from heaters to washing machines, electric kettles and bulbs. I also took part in the team installing a projector system at the cafeteria. This included assessing the layout and identifying the ideal location and preparing the mounting area and redirecting the necessary

cables for the projector via conduit. Ensured after installation the audio and video sources were connected and worked at quality performance. General maintenance of electrical equipment.

EDUCATION

AUGUST 2020 – UP TO DATE

BSC IN ELECTRONICS ENGINEERING, UNIVERSITY OF EASTERN AFRICA, BARATON, IN PROGRESS

Expected to graduate in august 2024

JANUARY 2016 - 2019

MOI GIRLS SECONDARY SCHOOL

KCSE GRADE OF B

ABILITIES

- Simulation and Verification: Experience with MATLAB simulations, Multisim and functional verification.
- Strong understanding of electronics principles and circuit analysis.
- Use of micro controllers such as Arduino and Raspberry PI.
- Proficient in designing, testing and troubleshooting electronics circuits and systems
- AUTOCAD: Proficient in using AUTOCAD for creating 2D and 3D models. Designing parts.
- Fourier Transform: Skilled in applying Fourier analysis to analyze signals and extract frequency components
- Proficient in programming languages such as Python and JavaScript
- Solid problem-solving and analytical skills
- Creativity and innovation

SENIOR PROJECT

WATER QUALITY SENSING SMART-WATCH

- Develop smart-watch prototype with water quality sensing capabilities.
- Design and implement sensors to measure various water parameters.
- Sensors communicate through Arduino micro controller.
- Programme the smart-watch to provide real-time water quality information to users.
- Conduct testing and data analysis to ensure accuracy and reliability of the device.
- Smart-watch and sensors communicate and connected via Bluetooth.

MAIN COURSE-WORK

- Digital electronics and Circuit design
- Signal processing and Embedded systems
- Project design and analysis
- Project management
- Power management and systems
- Programming language and coding

- Electronic fabrication
- Electrical installation and costing
- Control systems and industrial devices and circuits

SKILLS

- ❖ Driving skills, driving license class B
- ❖ To work effectively in a team environment; been part of various work groups
- ❖ Photography skills gained by working in the University Yearbook
- ❖ Strong problem-solving skills and coordination skills gained in departmental club “Smart minds”
- ❖ Strong communication skills both verbal and written
- ❖ Proficiency in English, Kiswahili
- ❖ Flexible, can quickly adapt to new situations and learn new technologies
- ❖ Meticulous and strong attention to details
- ❖ Strong time management skills
- ❖ Software skills Python, JavaScript, HTML
- ❖ Computer skills, using Word, Excel, Power Point and simulations (eg. MATLAB Simulations, Multisim)

REFERENCES

University of Eastern Africa, Baraton, Head of Technical Department

Mr James Ayiamba
0724-155 587
ayiembaj@ueab.ac.ke

Head of the UN Resident Coordinator’s Office Kenya

Ms Ulrika ferenius
0793-484 299
Ulrika.ferenius@un.org

German School Nairobi, Head of Technical Operations

Mr Vincent Kibisu
0721-514 032
Waibrahim108@gmail.com

Johnson and Johnson Belgium, Controls Service Manager

Mr Erik Spoelders
+32 499 55 87 55
Erik.spoelders@jci.com