

# SHAWAL MBALIRE

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<https://github.com/shawal-mbalire>  
[shawalmbalire.com](http://shawalmbalire.com)

Arduino, AHDL, ALTIUM, Assembly, Bash, C++, C, C#, CSS, EAGLECAD, HTML, JavaScript, LaTeX, MATLAB, Python, SQL

## Education

**Makerere University, Kampala** Feb 2022 - Jan 2026

Bachelor of Science, Electrical Engineering. CGPA: 3.99

**CodeIT Institute of Technology** Aug 2022 - Jan 2022

Certificate in python, aws, blockchain

**Run Automations and Robotics** Sep 2022 - Oct 2022

Certificate in IOT and Embedded systems

**Mengo Senior School** Jan 2019 - Dec 2021

Uganda Advanced Certificate of Education (Physics Chemistry Mathematics) 19 points

**Mengo Senior School** Jan 2015 - Dec 2018

Uganda Certificate of Education (Technical Drawing, Wood-work, German) 11 aggregate

**Nabweru Parents Pimary School** Jan 2010 - Nov 2014

Primary Leaving Examinations Certificate 7 aggregate

## Projects

**Unity Cyber Security Game** A third person shooter based on unity engine and C-sharp to teach CyberSecurity to teenagers

**Python Text to speech** A gui python project to call apis or libraries like gtts to speak out text

**Python Location FINDER** A python project to find location by checking the Ip address of a given device connected to the internet

**Patient Database** A web application invoking an online nosql Database Dynamo Db to store patient data on cloud

**IOT Attendance Monitoring** A low cost RFID attendance system for employees at a small enterprise in Uganda

**Qr code students Attendance** An automated data entry system for student in universities to only print a qr code for attendance monitoring.

**Student Calendar** A calendar with flutter emapsizing upcoming tests that can be updated by a class representative then shared to everyone else in the class.

**shawalmbalire.com** Developed a personal portfolio hosted on firebase with a custom domain from google domains.

## Hackathons

**UNESCO India-Africa Hackathon**

- Selected as one of 19 students to represent Uganda in India to develop solutions for Africa

**8th CAMTECH Med-Tech Hackathon**

- Ideated to develop solutions for faster data entry to reduce the tool on nurses in Uganda

**Decentralised Umoja 3 Bount Hack**

- Developed a solution for the price is right problem .
- Created a how to guide on creating the project for other learners to gain assistance.

## Coding Contests

**IEEE Extreme**

- Solved algorithm questions in a time frame of 24 hours
- Ranked in top 20 percent of the 6000 teams globally and third in Uganda

**Google Kickstart**

- Earned python badges after solving algorithm problems a skill learnt by participation in coding competetionswith google.

**IEEE puzzlers**

- First to attain the level 8 emerald badge in Uganda and 18th puzzler in IEEE globally.

## Leadership

**Chair IEEE Makerere University Student Branch**

Sep 2022 - Sep 2023

- Increased membership sixfold through publicising IEEE events on social media.
- Doubled the number of student chapters by forming relations with lecturers.

**Vice-Chair Makerere University RedCross Chapter**

Sep 2022 - Sep 2023

- assistance to the chair in attending meetings and organising evnts such as blood donations, community services among others.

**Coordinator Makerere University RedCross Chapter**

Feb 2022 - Sep 2022

- Increased the blood donations count by 50 percent relative to other colleges in University by reaching out to the respective class leaders and puhing for donation.

## Work

**Shop Assistant Zenith Auto Spare Parts**

Aug 2018 - Feb 2022

- Increased customers by 5 after registering business by registering the business on google maps
- Improved book keeping by printing data entry books

## Research

**A Low-Cost IoT based cloud solution for the Intelligent Rearing of Black Soldier Fly(BSF)**

## Other

**GDSC Makerere University**

- Presented flutter mock application for students to manage their timetable after attending a 3 week flutter training session.
- Increased membership from college of engineering by publicising GDSC events on social media

**Math olympiad**

- Selected as one of 6 students to represent Uganda in both International math olympiad(2020 and 2021) and Pan African Math olympiad (2021)
- Awarded bronze medal for outstanding performance in Pan African Math olympiad 2021

**Chess**

- Participated in the 2020 Premierbet National Chess League.

**Github**

- Ranked 228 among most active github users in Uganda

**Open Source**

- Part of Apache APISIX Global community and meetings

**Communities**

- Engineers for change
- GDSC Makerere University
- GDG Kampala
- Python Kampala
- IEEE
- Engineers without boundaries

- Uganda Institute of professional Engineers
- IBM Z Global Student Hub