

---MBABAZI ELIZABETH SHIRLEY---

Permanent Address: Kampala, Uganda

Telephone Numbers: +256777476539 | +256753584640

Email: shirleymbabazi@gmail.com | **Gender:** Female | **Nationality:** Ugandan.

LinkedIn: www.linkedin.com/in/mbabazi-elizabeth-shirley-797514162

CAREER GOAL

To leverage research and technical expertise in Software engineering AI and ML to drive meaningful insights through data analysis and contribute to improving lives and society growth.

PROFESSIONAL PROFILE

I am a versatile software developer and data analyst with expertise spanning web and mobile development, IoT, data analysis, and ML/AI systems. My work is driven by a passion for applying data-driven solutions to address environmental and societal challenges, while enhancing user experience and operational efficiency. I am committed to staying at the forefront of emerging technologies in IoT, software engineering, and data modelling and analysis. Known for my strong learning agility, I quickly adapt to new tools and methodologies. I bring hands-on experience with agile development, lecturing research, design, and collaborative team environments. My core interest lies in leveraging data analysis, artificial intelligence, and machine learning to create meaningful and lasting impact.

PROFESSIONAL SKILLS AND COMPETENCIES

- Carrying out Research, Lecturing, data analysis, Data collection, Machine Learning, Artificial Intelligence, MYSQL, MONGODB, Microsoft Visio, GIT/Version Control, Python, Tableau, d3.js, R and Project Management.

EDUCATION

Year	Degree	Institution
October 2022- Jan 2026	Master of Science in Computer Science	Makerere University, College of Computing and Information sciences, Department of Computer Science.
August 2015- Jan 2020	Bachelor of Science in software Engineering	Makerere University, College of Computing and Information Sciences
January 2009- December 2014	A level	Mengo Senior School
January 2009- December 2012	O level	St. Joseph's Senior Secondary School Naggalama

PROFESSIONAL EXPERIENCE

May 2026 – Present | Lecturer | Universal Technology and Management University | School of Technology, Computing & Engineering

- Head of Department Technical Vocational Education and Training
- Lecturer school of Technology, Computing & Engineering

May 2019 – Present | Researcher and assistant lecturer | Makerere University | School of Biomedical Sciences | Department of Physiology

- Assistant lecturer and junior researcher, lecturing bio-signal processing, Profession I and Profession II course units to biomedical engineering students.
- PI on a RSTMH grant from the year 2025 to 2026 as a junior researcher.
- On the Ground Coordinator Engineering World health program for 2024 where I oversaw the activities of the program, booking time and dates for the students to visit different hospitals, managing money and other staff on the project as well as budgeting
- Working on the development of a Keyscope Laparoscopic device and KeyView software on which I am the Quality assurance software Engineer in charge of the software testing and validation following the ISO and IEC standards of Software as a medical device development.



- Worked on a project titled "Crime Forecasting using Interpretable Regression Techniques" on which I was a co-developer. I did data analysis and developed a Machine learning model that was able to do crime prediction and forecasting.
- Research assistant on a project titled "A cross sectional study on exploring the lifestyle of Makerere University Staff with an aim of developing a bespoke healthy living program for people in academia." I collected data, transcribed and analysed the data.
- Research assistant on a project named "Impact of COVID-19 on provision of essential health services in Uganda". I developed the data collection tool and travelled to different parts of Uganda interviewing participants and carrying out key informant interviews.
- Project Title: "Mobile Phone enabled Diagnostics for Infectious Disease Diagnosis: Low-cost Tools for Digital Health in Uganda". On this project, I worked as the project coordinator and manager ensuring every activity of the project is done on schedule, developed the data collection tool, did data analysis for both the qualitative and quantitative data collected, wrote the application for the Institutional Review Board ethics committee, took part in analysis of data collected and also responsible for the management of the financial resources of the project. I have worked with a team from Glasgow University.
- Project Title: Estate platform. I was the requirements engineer who collected the requirements and designed the software before implementation of the software project. I was also part of the team that programmed the project as well as the project coordinator.

May 2022 – March 2025 | Technical Support Executive | IOTLink Systems Limited

- Served as the technical lead within the department, responsible for troubleshooting offline IoT SIMs, providing timely feedback to clients, and assisting with device installation and configuration.
- Analysed both structured and unstructured data to extract actionable insights, enabling the development of customized data bundles tailored to client needs while optimizing the company's profit margins.
- Collaborated effectively with cross-functional teams by supplying technical information to support client engagement and service delivery.
- Participated in client and interdepartmental meetings, presenting data-driven solutions and projections to communicate value and support strategic decision-making.

May 2018– August 2019 | Team Lead and programmer | Final year project | Makerere University Uganda

- Developer/Requirements Engineer: I built an embedded system that detects leakages of biogas in the plant and alerts the instructor to mitigate the Problem. I was the lead developer and this was my final year project for graduation.
- Handled and selected which sensors to use.
- Did Data collection and analysis

May 2017– August 2017 | Intern

- I participated in a training of constructing embedded Systems using both the Arduino and Raspberry Pi boards. In this training I attained a certificate that certifies me in working with the Arduino board.

SHORT COURSES

Case Western Reserve University CREC Program: Biomedical Research Faculty, Staff, and Students.

Introduction to Medical Software

PROFESSIONAL SOCIETIES AND COMMUNITIES

I am an active member of the IEEE Uganda Section (Region 8)

PROJECT PUBLICATIONS AND CONFERENCE PRESENTATIONS

- M. David, E. S. Mbabazi, J. Nakatumba-Nabende and G. Marvin, "Crime Forecasting using Interpretable Regression Techniques," 2023 7th International Conference on Trends in Electronics and Informatics (ICOEI), Tirunelveli, India, 2023, pp. 1405-1411, doi: 10.1109/ICOEI56765.2023.10126071.
- M. E. Shirley, N. H. Kasujja and G. Marvin, "Shapley Additive Explanations (SHAP) for Cardiovascular Diseases Prediction," 2024 2nd International Conference on Sustainable Computing and Smart Systems (ICSCSS), Coimbatore, India, 2024, pp. 1429-1437, doi: 10.1109/ICSCSS60660.2024.10625027.
- <https://doi.org/10.1089/tmj.2022.0375>

PROGRAMMING SKILLS

- | | |
|--------------|------------|
| • Javascript | MySQL |
| • Python | Firebase |
| • R | d3.js |
| • C# | Tableau |
| • PowerBI | PostgreSQL |
| • MATLAB | MAXQDA |

PERSONAL SKILLS

I am a good communicator with excellent listening and observational skills, an excellent team player, hardworking, research passionate, social, time manager, flexible, dependable, honest with a high integrity, willing to learn, and self-driven.

LANGUAGES:

English – Full professional proficiency

Luganda – Native proficiency

