

Beaton Ndawa

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Personal Statement

Versatile Electrical and Electronics Engineer with expertise in power engineering, machinery interfacing, and intricate circuit design. Proficient in integrating IoT technology and implementing machine learning algorithms to enhance system intelligence. Experienced in optimizing electronic components for smart systems, demonstrating a well-rounded approach to diverse projects.

Personal Details

Sex: Male
Nationality: Malawian

Software Skills

- Linux
- SPICE
- Microsoft Office
- Windows OS
- KiCAD
- Multisim
- Fusion 360
- Adobe Photoshop
- Virtual Box
- Visual Studio Code

Hardware Skills

- Digital Multimeter
- Microcontrollers
- Microprocessors
- Soldering
- PCBs
- PLCs
- Welding & Fabrication

Programming Languages

- C++
- Python
- SQL
- Arduino
- JavaScript
- Scratch
- Ladder Logic
- PHP

AI Proficiency

- Machine Learning
- Computer Vision
- Natural Language Processing
- Large Language Models

Work Experience

Factory Statistician 2024-09 – Present Alliance One Tobacco (Malawi)

- Specialize in data analysis and reporting, focusing on consolidating, interpreting, and visualizing factory statistics to enhance operational efficiency.
- Generate production metrics, identify trends, and provide forecasts to support informed strategic decision-making.
- Optimize labour productivity and costs by analysing data and identifying improvement opportunities.
- Compile detailed factory processing reports, including projections, downtime analysis, and productivity summaries, while maintaining key data systems.

Training Matrix Analyst Intern 2024-01 – 2024-08 Illovo Sugar (Malawi) plc

- Developed training matrices for engineering departments, outlining essential skills and competencies required for each role.
- Conducted thorough research and collaborated with department heads to understand training needs.
- Utilized advanced Excel functions, including pivot tables and analysis tools, to organize and analyse training data effectively.
- Identified skill gaps and recommended targeted training programs to enhance workforce performance.
- Updated and revised matrices based on feedback and evolving organizational needs.
- Provided training and support to staff on matrix usage and interpretation.
- Produced detailed reports summarizing training effectiveness and employee performance improvements.

Maintenance Engineering Intern 2022-08 – 2023-02 The Foods Company Limited

- Worked on relays, contactors, MCCB breakers, performed tests for motor proper working.
- Worked on electrical equipment (temperature and pressure sensors, valves, photoelectric proximity sensors, etc.) on an Ice plant.
- Performed corrective and preventive maintenance on cold rooms and pumps.
- Maintained daily logs of operation, maintenance and safety activities.

Soft Skills

- Team Work
- Integrity
- Problem Solving
- Leadership
- Ambition
- Communication
- Empathy
- Project Planning
- Organization
- Creativity
- Decision Making
- Willingness to learn

Interests

- Watching Documentaries
- Reading Articles
- Table Tennis

Languages

English	<div style="width: 75%;"><div style="background-color: #f0e68c; height: 10px;"></div><div style="background-color: #a9a9a9; height: 10px;"></div></div>
Chichewa	<div style="width: 85%;"><div style="background-color: #f0e68c; height: 10px;"></div><div style="background-color: #a9a9a9; height: 10px;"></div></div>
Tonga	<div style="width: 40%;"><div style="background-color: #f0e68c; height: 10px;"></div><div style="background-color: #a9a9a9; height: 10px;"></div></div>
Tumbuka	<div style="width: 20%;"><div style="background-color: #f0e68c; height: 10px;"></div><div style="background-color: #a9a9a9; height: 10px;"></div></div>

Achievement & Awards

- Registered with Malawi Engineering Institution (MEI)
- MUBAS Dean's List from year 1 to year 5
- Best Overall student award at Ndirande Hill Secondary School
- Certificate of completion in Excel Skills for Business from Macquarie University
- Certificate of completion in Python Data Structures from the University of Michigan
- Certificate of completion in The Arduino platform and C programming from the university of California
- Certificate of participation in the 13th Annual global health Technologies Design Competition
- Certificate of participation in the Future-M Hackathon
- Certificate of completion in social media marketing from the African Leadership Institute.

Biomedical Engineering Intern

2022-04 – 2023-07

Rice360 Institute of Global Health Technologies

- Conceptualised and designed innovative solutions for medical challenges using the Engineering design process.
- Collaborated with healthcare professionals to understand requirements and incorporate user feedback into design iterations.
- Analysed data, performed simulations, and optimized designs for efficiency and effectiveness
- Applied engineering principles to develop medical devices, prosthetics, or diagnostic equipment

IT Manager

2020-01 – Present

Maso Enterprise

- Created, maintained, and troubleshoot websites, ensuring optimal performance and user experience.
- Managed network operations, including configuration and monitoring, to ensure reliability and security.
- Performed system maintenance, updates, and troubleshooting to minimize downtime and ensure seamless operations.
- Provided technical support, resolving issues promptly to maintain smooth and secure IT operations across the organization.
- Developed and tested APIs to enhance system functionality, improve integrations, and streamline data exchange between systems.

Education & Training

Bachelor of Electrical & Electronics Engineering

Malawi University of Business & Applied Sciences

2018 - 2023

Certificate in Microsoft Office Suite

Dreamers School of Computing

March – June 2017

Malawi School Certificate of Education (MSCE)

Ndirande Hill Secondary School

2012 – 2016

Gateman – School Attendance Tracking System

2024

- Engineered a sophisticated timekeeping solution for teacher attendance management, featuring a robust fingerprint sensor, ESP32 microcontroller, OLED display, LED indicators, charging module, and a high-capacity 3.7-volt battery.
- Seamlessly integrated hardware components with a web application to automate attendance tracking, generate punctuality assessments, and facilitate comprehensive evaluation processes.

Smart Microgrid Metering System (Final Year Project)

2023

- Developed an intelligent system for measuring energy usage, which can be implemented in microgrids. This system enables users to be charged according to the amount of electricity they have consumed, with the ultimate goal of promoting sustainability.
- A web-based system was also created to generate a 20-digit token as well as monitor the power consumption of each user.
- The device consists of an ATmega 2560 R3 WIFI, Voltage Transformer, Current Transformer, SD Card Module, 20 x 4 LCD Display, 4 x 4 Matrix Keypad, Buzzer, IR Sensor, and a 5v relay.

IV Drip Controller

2022

- Designed and developed a device to improve the accuracy of intravenous fluid administration and enhance patient therapy outcomes.
- The device has several key objectives, including monitoring and controlling the flow of IV fluid in the drip, measuring the volume of fluid in the drip, and detecting the presence of bubbles in the fluid.
- The device consists of an ATmega 328p, Servo Motor, IR Sensor, 20 x 4 LCD Display and Push buttons

Solar Tracker Water Purifier

2020

- Designed and developed a device that purifies water up to 99.99% using solar energy.
- The device's operation and data collected from sensors were monitored through a web-based system.
- The device includes photodiode sensors, a motor, an Arduino controller, an LCD, a 12-volt battery, a temperature sensor, gears, and the main casing.

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