

Gift Bongani Mahlambi

+27 61 968 8502 | [✉ giftmahlambileroy@gmail.com](mailto:giftmahlambileroy@gmail.com) | [in bongani-gift-mahlambi](https://www.linkedin.com/in/bongani-gift-mahlambi) | [globe giftmahlambi.co.za](https://www.giftmahlambi.co.za) | [📍 Cape Town, WC, South Africa](#)

SUMMARY

Computer Engineering graduate (BEngTech) with strong expertise in networking, infrastructure deployment, and system design. Hands-on experience in TCP/IP, subnetting, router and switch configuration, fibre splicing, CCTV systems, and full network deployment. Proficient in Python, C/C++, Java, SQL, JavaScript, and Linux, with a proven ability to architect and deliver solutions including an SDN-based multi-router configuration tool and a relational database management system. Recognised for rapid problem-solving, meticulous troubleshooting, and translating complex technical requirements into practical, real-world solutions. Actively seeking entry-level roles in Network Engineering, Cloud Engineering, IT Support, or Software Development.

EXPERIENCE

HiTech Fibre

Nov. 2025 – Mar. 2026

Part-Time Network Technician Intern

Cape Town, WC

- Assisted in the deployment and configuration of **network infrastructure** routers, switches, and structured cabling across **10+ client sites**, supporting reliable, production-ready connectivity at each location
- Contributed to technical support for a user base of **120–200 end users**, helping diagnose and resolve network and hardware faults to minimise service disruption
- Took part in the rollout of **7 network infrastructure deployments** and assisted with the installation of **30+ CCTV cameras across 2 sites**, supporting integrated connectivity and physical security delivery
- Performed **fibre optic splicing** and end-to-end signal testing, ensuring signal integrity and consistent connectivity across completed installations
- Helped identify and resolve **connectivity bottlenecks**, contributing to improved network stability and a reduction in client-reported downtime

Encounter Church Cape Town

Jun. 2022 – Present

Technical Systems Volunteer

Cape Town, WC

- Set up and maintained **live electronic media systems** and audio equipment, supporting consistent performance across large-scale events
- Identified and resolved technical faults in fast-paced, live environments, often working independently under time pressure
- Trained and mentored new volunteers** on electronic systems and media hardware; authored technical guidance documentation adopted team-wide
- Collaborated with the technical team to uphold **reliable system performance** and consistent operational standards

PROJECTS

SDN Multi-Router Configuration GUI

Python · GNS3 · Linux · RESTCONF API · VirtualBox

- Architected a **centralised software-defined network (SDN)** platform that fully automates multi-router configuration and transitions networks from static to controller-driven routing
- Built a GUI over a virtual networking environment using GNS3 and VirtualBox; integrated RESTCONF API for real-time dynamic network control and management
- Authored comprehensive **technical documentation** covering system architecture, IP configuration, routing logic, and network troubleshooting procedures

Database Management System (Group Project)

MySQL · ERD Modelling · SQL

- Designed and deployed a **relational database system** meeting real-world business requirements for efficient data storage, retrieval, and reporting
- Constructed ERD models, flow diagrams, and technical documentation; executed advanced SQL querying and systematic query optimisation

- Drove technical decision-making within a cross-functional team, ensuring all documentation and deliverables met quality standards

Electronic Ballot Machine & Vote Counter

Java · GUI Development · Data Integrity

- Developed a **secure electronic voting system** that automates vote collection and counting, enforcing duplicate-entry prevention and tamper-resistant data storage
- Implemented Java-based GUI, data integrity controls, and automation logic demonstrating **hardware-software integration** and secure system design principles
- Validated system performance against reliability and compliance benchmarks across the full development lifecycle

Solar-Powered Smart Washing Machine

Arduino · Tinkercad · Embedded C · IoT Sensors

- Engineered an **embedded IoT system** capable of completing full wash cycles under fluctuating solar power conditions via intelligent energy management logic
- Integrated motors, IR sensors, LEDs, and actuators; programmed control firmware in Arduino C and validated design through **Tinkercad circuit simulation** and physical prototype testing
- Demonstrated end-to-end proficiency in **circuit design, sensor integration, power automation**, and hardware simulation

EDUCATION

Cape Peninsula University of Technology

Feb. 2022 – Apr. 2026 (Expected)

Bachelor of Engineering Technology in Computer Engineering

Cape Town, WC

- **Core Modules:** Embedded Systems, Computer Architecture, Network Systems, Database Systems, Software Design, Computer Graphics, Operating Systems
- **Key Competencies:** Network infrastructure design, hardware-software integration, electronic system simulation, technical documentation, cross-disciplinary engineering problem-solving

SKILLS

Networking & Infrastructure : TCP/IP · IP Addressing & Subnetting · Routing & Switching · VLANs · DNS · DHCP · SDN · RESTCONF API · Fibre Optic Splicing · CCTV Systems · Full Network Deployment · Fault Diagnosis & Troubleshooting · Network Monitoring

Programming & Development : Python · Java · C/C++ · SQL · JavaScript · HTML/CSS · REST API Integration · OOP · Algorithm Design

IT Support & Systems : Linux · Windows OS · Hardware and Software Troubleshooting · System Configuration · Cable Management · End-User Support · Incident Diagnosis

Soft Skills : Technical Documentation · Problem Solving · Cross-functional Collaboration · Mentoring · Independent Work

Languages : IsiZulu (C1) · English (C1) · IsiXhosa (B1) · SePedi (B1) · SeSotho (B1)

REFERENCES

Mr. Thomas Brown

Network Technician & CEO — HiTech Fibre

- 📞 +27 63 690 7604 | ✉️ Thomas@hitechfibre.co.za

Mr. Marco Van Der Sluys

Head of Media Department — Encounter Church Cape Town

- ✉️ marco@encounterchurch.co.za | 📞 +27 81 277 7330