

Sibusiso Khumalo

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Electrical Engineering student at the University of the Witwatersrand, building toward a career spanning Data Science and AI Engineering. Hands-on experience shipping agentic LLM pipelines, computer-vision safety systems, and full-stack platforms in Python, FastAPI, and React. Adept at problem-solving and collaboration, with a background in clinical medical practice and community health initiatives. Seeking opportunities to grow from data-driven analysis into applied AI engineering roles.

Experience

AI Engineering/Data Science Intern *Isazi.ai (Isazi Origins Vac Programme)* 17/06/2026 - 10/07/2026

Key Responsibilities

- Independently designed and built AI Middleman, an AI-powered WhatsApp assistant that filters contact-introduction requests for a "superconnector" client, matches them against a contact database, and drafts replies for human approval
- Built an agentic pipeline covering intent classification, database-backed contact matching, and reply drafting, integrating the Meta WhatsApp Cloud API, PostgreSQL, and multiple LLM providers
- Worked independently on the full build, supervised by a Project Manager and guided by a People and Culture Mentor and a Technical Mentor

Skills: Python, FastAPI, PostgreSQL, LLM Integration (Groq, Llama 3.1), WhatsApp Business Cloud API, Agentic Pipeline Design, Prompt Engineering, React
Reference: Gen McKay (Head of HR, Isazi.ai), gen@isaziconsulting.co.za

Padel Booking App Developer Intern *Astro* 01/12/2025 - 23/01/2026

Key Responsibilities

- Implemented features for a padel court booking application as part of a development team
- Developed and debugged both frontend and backend functionality
- Collaborated with team members on feature development and code integration
- Utilized modern mobile development frameworks and cloud services

Skills: FlutterFlow, Dart, Firebase, Full-Stack Development, Debugging, Team Collaboration
Reference: Anil Lackahoo, dev@bookastro.co.za

Full-Stack Web Developer, *PikMe* 1/10/25 - 21/10/25

Key Achievements

- Designed and developed a full-stack web platform connecting users with local service providers
- Implemented user authentication, service provider profiles, and booking management systems
- Deployed production-ready application with database design and optimization

Skills: Full-Stack Development, React, Node.js, Express.js, Supabase, Payment Integration, Cloud Deployment
Reference: Romeo Rathebe, mrromeorathebe@gmail.com

Key Achievements

- Led committee to achieve 2024 Wits Sports Club and Committee of the Year award.
- Organized events, managed sponsors, and oversaw collaborations with external organizations.
- Chaired meetings and resolved conflicts to ensure smooth club operations.
- Coordinated event planning and member recruitment, promoting esports, participated in competitive Clash Royale.

Skills: Leadership, Event Planning, Team Collaboration, Conflict Resolution

Reference: Mr. Tebogo Rabothata, Tebogo.Rabothata@wits.ac.za

Voluntary Medical Male Circumcision Provider *Centre for HIV/AIDS Prevention Studies (CHAPS)***6-8 July 2022****Key Responsibilities**

- Served as Circumcision Surgeon under Locus Agreement at Katlehong North Clinic
- Conducted pre and post-circumcision assessments
- Provided medical care and counselling to patients

Skills: Medical Procedures, Surgical Assistance, Patient Care, Assessment

References: Mr Tsietsi Matiea, TMatiea@chaps.org.za; Radika Ishwarchand, Rishwarchand@chaps.org.za

Deputy Chairperson, Wits E-Sports Club *University of the Witwatersrand, Johannesburg***07/2022 - 11/2022****Key Contributions**

- Assisted chairperson in event planning and sponsor management.
- Ensured smooth execution of gaming events and maintained club relationships.

Skills: Event Coordination, Sponsor Management, Team Collaboration

Reference: Mr. Tebogo Rabothata, Tebogo.Rabothata@wits.ac.za

COVID-19 Vaccinator *University of Pretoria & Anglo-American SA, Upington***12/2021 - 02/2022****Key Responsibilities**

- Administered COVID-19 vaccines in communities in and surrounding Upington
- Conducted community outreach programs reaching residents in Northern Cape

Skills: Medical Administration, Data Management, Community Engagement

References: Danie Thirion, +27 82 095 5235; Lesego Sehume, +27 82 791 5369

Clinical Associate Student *Kopanong Hospital, Vereeniging***07/2020 - 10/2020****Key Contributions**

- Assisted in cesarean sections
- Conducted patient examinations and documented medical histories

Skills: Patient Care, Clinical Documentation, Surgical Assistance

Reference: Dr. JB Bosoko, +27 81 485 5513

Education**Bachelor of Science in Electrical Engineering** *University of the Witwatersrand***2021 - Present**

- Expected Graduation: 2027
- Relevant Coursework: Embedded Systems, Circuit Design, Signal Processing, Power Engineering, Electronics, Control Systems, Power Systems, Electromechanical Conversion Techniques, Renewable Energy

- Graduation: 2020
- Relevant Coursework: Clinical Skills, Anatomy, Physiology, Pharmacology

- Relevant Coursework: Mathematics, Religion Studies (with Distinction), Life Orientation (with Distinction), Life Sciences, Physical Science, English HL, Afrikaans FAL

Skills

- **Software Development:** C/C++, Python, JavaScript, React, Node.js, Express.js, Dart, FlutterFlow, Supabase, Firebase, SQL
- **Technical:** MATLAB, LTSpice, Arduino, Circuit Design, Data Structures, Full-Stack Development
- **Soft Robotics:** Design and Prototyping, Pneumatic Actuation and Sensing for Wearable Health Devices, Heat-Sealing and 3D Printing for Soft Robotic Geometries, Arduino and ESP32 Programming, Integration of Pumps, Solenoid Valves, and Sensors in Soft Robotics, Design and Modelling of Systems using CAD and Inkscape, Interdisciplinary Project Collaboration and Prototyping
- **Engineering:** Embedded Systems, Signal Processing, Power Electronics, Control Systems
- **Web Development:** Frontend Development, Backend Development, Payment Integration, Cloud Deployment
- **Mobile Development:** FlutterFlow, Cross-Platform Development, Firebase Integration
- **Medical:** Clinical Procedures, Patient Assessment, Vaccination Administration
- **Leadership:** Team Management, Event Planning, Conflict Resolution
- **Languages:** English (Fluent), IsiZulu (Fluent), Afrikaans (Proficient)

Certifications

- Volunteer Medical Male Circumcision for HIV Prevention Course (Centre for HIV/AIDS Prevention Studies, 2022)
- Advanced TEFL/TESOL Certificate (TEFL Universal, 2022)
- First Aid Level 1 (Medical Minds, 2018)
- COVID-19 Vaccination Certification (Knowledge Hub, 2021)
- Matlab Onramp (Mathworks, 2026)
- Simulab Onramp (Mathworks, 2026)