

# Ayanda Khumalo

079-949-6079 | [ayandakhumalo080@gmail.com](mailto:ayandakhumalo080@gmail.com) | [linkedin.com/in/Ayanda](https://linkedin.com/in/Ayanda) | [github.com/Ayyanda](https://github.com/Ayyanda)

## EDUCATION

### WeThinkCode

*Diploma in Software engineering*

Johannesburg, Gauteng

Sept. 2024 – Dec 2025

### Newbridge Graduate Institute

*CompTIA Systems and Network Support*

Durban, KwaZulu Natal

Feb 2023 – Dec 2023

*Microsoft365 Expert and Security Associate*

Feb 2024 – Dec 2024

## EXPERIENCE

### CompTIA Systems and Network Support Tutor

2024

*Self-employed*

Durban, KwaZulu Natal

- Mentored 3 first-year students weekly, boosting pass rates
- Put together interactive materials on TCP/IP, OSI Model, and routing
- Provided tailored troubleshooting support and guidance, increasing course completion
- Collaborated with peers to develop resources that reduced frustration by about 20%

### Frontliner

*Execuspeccs*

May 2023 - October 2023

Durban, KwaZulu Natal

- Scheduled customer appointments and managed high-volume calls with efficiency.
- Guided customers in selecting frames and lenses tailored to their needs
- Secured consistent sales of eyewear and accessories through personalized service
- Maintained smooth front-of-house operations and elevated customer satisfaction

### Check-in Volunteer

June 2024

*Comrades Marathon Registry*

Durban, KwaZulu Natal

- Registered 2,000+ runners within 60-second targets during peak hours.
- Coordinated with 20 volunteers to ensure smooth, delay-free check-ins
- Maintained accuracy and energy across 12-hour+ shifts
- Supported flawless execution of South Africa's largest ultra marathon

## HACKATHON EXPERIENCE

### Microsoft AI Skills Challenge Hackathon

Virtual 2024

*Participant*

Johannesburg, Gauteng

- Collaborated in a 3-person team to build an AI-powered study buddy for personalized learning
- Designed tutoring logic to identify weak topics and reinforce understanding through flashcards and quizzes
- Applied ethical AI principles to support inclusive, accessible education for social good

### Mukuru SheHacks Hackathon

Physical 2024

*Participant*

Johannesburg, Gauteng

- Co-designed a loyalty rewards platform for Mukuru customers, focused on milestone tracking and redeemable benefits
- Architected backend logic with my team for secure transaction history and modular reward components using Django and SQL
- Led UI/UX prototyping in Figma, mapping user journeys and designing scalable, empathy-driven interfaces
- Collaborated in a cross-functional team to deliver a working MVP under 48-hour constraints

## PROJECTS

---

### **Robot Worlds** | *Java, Maven, SQLite, Docker, CI/CD, ORM*

- \* Built a client-server simulation in a group of 4 where robots interact via a JSON protocol, with an added HTTP Web API layer for external access.
- \* Implemented an extensible command framework (forward, look, state, repair) and integrated SQLite persistence with SAVE/RESTORE commands.
- \* Applied OOP principles and separation of concerns, designing single-responsibility classes and a modular architecture.
- \* Automated builds and tests with Maven, Makefile, and shell scripts; containerized with Docker and deployed via a CI/CD pipeline.

### **DishWhiz – AI-Powered Recipe Generator(In progress)** | *Python, SheCodes AI API, CLI, HTML, CSS, Javascript*

- \* Built a command-line tool that generates recipes based on user-provided ingredients and cuisine preferences
- \* Integrated Google SheCodes AI API for dynamic recipe creation, supporting multiple recipe types
- \* Designed modular, extensible code for future GUI or web app integration
- \* Implemented error handling and input validation for a robust user experience

## TECHNICAL SKILLS

---

**Languages:** Java, Python, JavaScript, HTML5, CSS3, SQL (SQLite)

**Databases & Backend:** MongoDB, SQLite, JDBC, REST APIs

**DevOps & Tools:** Docker, CI/CD Pipelines, Git, GitHub, Netlify, VS Code, Linux, IntelliJ

**Testing & Frameworks:** pytest, JUnit, Test-driven Development, Behavior-driven development

**Socket Programming & Data:** Socket Programming, JSON Data Serialization

**Cloud & Network Engineering:** OSI Model, TCP/IP, Router Configuration, IP Addressing & Subnetting, Microsoft 365 Administration, Cloud Concepts, Troubleshooting & Support

**Certifications:** CompTIA A+ Core 1, CS50 Programming in Python, IPL UI/UX Design fundamentals