

NTUTHUKO MAPHALALA

📍 Pietermaritzburg, KwaZulu-Natal

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PROFESSIONAL SUMMARY

Bachelor of Science in Computer Science and IT graduate with practical experience in software development, data analysis, automation, and networking. Proficient in developing AI-powered tools, visual dashboards, and full-stack applications. Skilled in SQL, Python, R, Microsoft Azure, Power BI, and cloud-based integration. Demonstrates strong problem-solving, attention to detail, and a passion for building innovative, data-driven solutions.

CORE COMPETENCIES

Data & Development:

SQL, Python, R, Excel, PowerApps, Power Automate, Jupyter Notebook

Networking & Infrastructure:

Network Protocols, IPv4 Addressing, Wireless Access, DHCP, CI/CD Pipelines, Azure DevOps

Data Visualization & Reporting:

Power BI, Tableau, Excel Dashboards, R (ggplot2)

Programming Languages:

Python, Java, R, C++, C#, JavaScript, HTML, CSS

Tools & Frameworks:

React.js, Node.js, Express.js, GitHub, Visual Studio Code, Eclipse, Cursor, SharePoint, Microsoft Azure, Home Assistant

Operating Systems:

Windows 10 & 11, macOS, Ubuntu

Soft Skills:

Problem-Solving, Attention to Detail, Communication, Team Collaboration, Adaptability

EDUCATION

Bachelor of Science in Computer Science and Information Technology

University of KwaZulu-Natal, Pietermaritzburg

Graduated: May 2023

Focus Areas: Software Development, Networking, Databases, Data Analysis, Cloud Technologies

PROFESSIONAL EXPERIENCE

Data and IT Development Intern

Institute for Commercial Forestry Research (ICFR), Pietermaritzburg

Aug 2024 – Present

- Developed a secure offline AI assistant using local LLMs to process and query internal PDF documents.
- Collected and analyzed forestry field data using R and Excel, improving data quality and insights.
- Automated reporting workflows, reducing report generation time by 40%.
- Built Home Assistant integrations for Sunsynk inverters and sensors for real-time system monitoring.

Business & Data Analyst – BMW YES Programme

Afrika Tikkun Services, Pietermaritzburg

Mar 2024 – Jul 2024

- Managed and cleaned over 900 student records in SA-SAMS, reducing data errors by 10%.
- Wrote SQL queries to track, validate, and report academic performance metrics.

Azure Cloud Architect Apprentice

Deviare (Microsoft Interprovincial Apprenticeship), Remote

Sep 2023 – Mar 2024

- Developed scalable Azure-based apps and optimized cloud infrastructure.
- Built CI/CD pipelines that cut deployment time by 50% and improved reliability.

- Applied principles of virtualization, networking, and security for enterprise cloud solutions.
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PROJECTS & INNOVATIONS

Microsoft Copilot AI Coaching Bot

Created an AI-powered virtual assistant using Microsoft Azure and OpenAI to deliver coaching insights.

 [Live Demo](#)

FNB App Academy

Built full-stack web applications using HTML & CSS, JavaScript, React, Node.js, and Express.js. Employed API integration and responsive design best practices.

TechGuard IT Solutions Website

Designed a professional IT solutions website with cloud-integrated contact and services sections.

 [Live Demo](#)

PowerApps Lifestyle Survey App

Developed a SharePoint-integrated app with automated data collection and analytics via Power Automate.

 [Live Demo](#)

Pong Game Project

Created a classic Pong game using HTML, CSS, and JavaScript.

 [Play Now](#)

ICFR Inspection & Automation Systems

- Created a digital inspection app for fieldwork using PowerApps (Microsoft login required).
- Built real-time dashboards through sensor integrations in Home Assistant.

 [Live Demo](#)

Portfolio Website

Responsive site showcasing work and experience.

 [View Portfolio](#)

CERTIFICATIONS

- **Networking Basics** – Cisco Networking Academy, 2025
- **Azure Cloud Architect** – Deviare, 2023
- **Full Stack Development** – Itvarsity (FNB App Academy), 2025
- **Tableau 2024.1 Essential Training** – LinkedIn Learning, 2025
- **Power BI Essential Training** – LinkedIn Learning, 2025
- **Introduction to Data Science** – LinkedIn Learning, 2025
- **Data Visualization with R** – Cognitive Class, 2024
- **R for Data Science** – Cognitive Class, 2023

BADGES

- **Cisco Networking Basics (2025):** Mastered core concepts of IP addressing, routing, and network protocols.

AVAILABILITY & REMUNERATION

Available immediately, subject to a 2-week notice period.

Remuneration is negotiable and aligned with company budget.

REFERENCES

Available upon request.