

# Ntuthuko Maphalala

 Pietermaritzburg, KwaZulu-Natal

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## Professional Summary

BSc Computer Science & IT graduate with practical experience in **software development (3+ years), cloud solutions, data analytics, and AI tools**. Skilled in **Python, SQL, Power Platform, and Azure**, with a proven record of building **AI assistants, automation workflows, and full-stack applications**. Recognized for adaptability, strong problem-solving, and delivering **data-driven business solutions**.

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## Core Competencies

- **Data & Development:** Python, SQL, R, PowerApps, Power Automate, Jupyter Notebook
  - **Data Visualization:** Power BI, Tableau, Excel Dashboards, ggplot2
  - **Programming Languages:** Python, Java, PHP, R, C++, C#, JavaScript, HTML, CSS
  - **Cloud & Infrastructure:** Microsoft Azure, Azure DevOps, CI/CD, Virtualization
  - **Frameworks & Tools:** React.js, Node.js, Express.js, GitHub, VS Code, SharePoint, Cursor AI
  - **Networking:** IPv4 Addressing, DHCP, Wireless Networks, Routing Protocols
  - **Operating Systems:** Windows, macOS, Ubuntu
  - **Soft Skills:** Problem-Solving, Team Collaboration, Communication, Attention to Detail
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## Education & Training

### Bachelor of Science in Computer Science & IT


*University of KwaZulu-Natal, Pietermaritzburg*

 **Graduated: May 2023**

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

### Microsoft PowerUp Program

*Microsoft – Remote / Virtual*


 **Aug 4, 2025 – Present**

- Introduction to Power Platform
  - Dataverse (data modeling & model-driven apps)
  - Power Apps (Canvas Apps, low-code development)
  - Power Automate (workflow automation)
  - Power BI (business intelligence & data visualization)
  - **PowerUp Challenge:** Integrated Power Platform project
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## Professional Experience

### Data & IT Development Intern


*Institute for Commercial Forestry Research (ICFR), Pietermaritzburg*

 **Aug 2024 – Present**

- Built a **local AI assistant** using LLMs for querying internal PDFs securely.
- Automated reporting workflows in **Python & R**, cutting report time by **40%**.
- Developed **Home Assistant IoT integrations** for Sunsynk inverters & sensors.
- Cleaned and analyzed forestry data, improving **data quality & insights**.

### Business & Data Analyst – BMW YES Programme

*Afrika Tikkun Services, Pietermaritzburg*

 **Mar 2024 – Jul 2024**

- Managed & cleaned **900+ student records** in SA-SAMS, reducing errors by **10%**.
- Designed **SQL queries** for academic performance tracking & reporting.

## Azure Cloud Architect Apprentice

*Deviare (Microsoft Interprovincial Apprenticeship), Remote*



**Sep 2023 – Mar 2024**

- Designed and deployed **scalable Azure cloud applications**.
  - Implemented **CI/CD pipelines**, reducing deployment time by **50%**.
  - Applied **networking, virtualization, and security** best practices.
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## Projects & Innovations

- AI PDF Chat Assistant: Offline LLM (Ollama + Gemma3) for document queries.
  - Microsoft Copilot Coaching Bot – AI assistant built with Azure & OpenAI for guided coaching. [🔗 Live Demo](#)
  - FNB App Academy Projects – Full-stack apps using React, Node.js, Express.js, and API integrations.
  - Pong Game Website – Interactive and responsive browser-based Pong game. [🔗 Play](#)
  - TechGuard IT Solutions Website – Professional IT services website. [🔗 Visit](#)
  - PowerApps Lifestyle Survey App – Automated data collection and workflows via Power Automate + SharePoint.
  - ICFR Digital Inspection System – Canvas Power App for forestry field inspections.
  - Portfolio Website – Responsive personal portfolio showcasing projects and skills. [🔗 Visit](#)
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## Certifications

- **Networking Basics – Cisco Networking Academy (2025)**

- **Full Stack Development – FNB App Academy (2025)**
  - **Learning REST APIs – LinkedIn Learning (2025)**
  - **Data Analytics Foundations – LinkedIn Learning (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)**
  - **Azure Cloud Architect – Deviare (2023)**
  - **R for Data Science – Cognitive Class (2023)**
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## **Badges**

- **Cisco Networking Basics (2025):** Mastered IP addressing, routing & protocols
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## **Availability & Remuneration**

- Available immediately (2-week notice if required)
  - Remuneration: Negotiable, aligned with company budget
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## **References**

Available on request