NTUTHUKO MAPHALALA

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Pietermaritzburg, KwaZulu-Natal

PROFESSIONAL SUMMARY

Bachelor of Science in Computer Science and Information Technology graduate with hands-on experience in data analysis, automation, software development, and networking fundamentals. Proficient in SQL, Python, R, and Excel for data processing and reporting. Skilled in creating insightful dashboards using Power BI and Tableau. Experienced in low-code development with PowerApps and workflow automation using Power Automate. Adept at SharePoint integration and leveraging Microsoft Azure cloud technologies. Knowledgeable in network protocols, media, IPv4 addressing, and wireless access technologies. Strong analytical mindset, attention to detail, and a passion for delivering innovative, data-driven solutions.

CORE SKILLS

- Data Analysis: SQL, Python, R, Microsoft Excel
- Networking: Network Media, Protocols and Standards, Wireless Access, Network Types, Application Layer Services, IPv4 Addressing
- Data Visualization: Power BI, Tableau, Excel Charts
- Operating Systems: Windows 10 & 11, MacOS, and Ubuntu
- Programming Languages & Frameworks: Python, Java, R, C++, C#, JavaScript, HTML, CSS
- Tools and Platforms: Visual Studio Code, Eclipse, PowerApps, Power Automate, Microsoft Azure, GitHub, Jupyter Notebook, SharePoint, Node.js, React.js, Express.js, Git
- Software Development: Full-Stack Web Development, RESTful API Design, Application Deployment, Agile & Best Practices
- Soft Skills: Problem-solving, Communication, Attention to Detail, Team Collaboration, Adaptability

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EDUCATION

Bachelor of Science in Computer Science and Information Technology
University of KwaZulu-Natal, Pietermaritzburg
Graduation Date: 03 May 2023

- Focus areas included software development, database systems, data analysis, and cloud technologies.

PROFESSIONAL EXPERIENCE

Data and IT Development Intern – Eucalypt Tree Improvement Project
Institute for Commercial Forestry Research (ICFR), Pietermaritzburg
August 2024 – Present

- Developed a secure offline AI assistant using local LLMs to process and query internal PDF files.
- Collected, captured, and analyzed forestry field data using R and Excel.

- Collaborated with research teams to improve data accessibility and automate reporting workflows.

Business and Data Analyst – BMW YES Programme
Afrika Tikkun Services, Pietermaritzburg
March 2024 – July 2024

- Managed over 900 student records in SA-SAMS, achieving a 10 percent error reduction.

- Implemented SQL scripts to validate and track academic performance data.

Azure Cloud Architect Apprentice
Deviare (Microsoft Interprovincial Apprenticeship), Remote
September 2023 – March 2024

- Developed and optimized Azure-based applications for performance and scalability.

- Built CI/CD pipelines to automate deployment workflows and infrastructure efficiency.

PROJECTS AND INNOVATIONS

FNB App Academy Capstone Project

- Successfully completed an intensive software development training program where I designed and built full-stack web applications using HTML, CSS, JavaScript, React, and Node.js. Applied best practices in programming, API integration, and responsive design to deliver functional and user-friendly apps.

Pong Game Project

- Built a browser-based Pong game using HTML, CSS, and JavaScript.

- Link: https://ntuthukomaphalala.github.io/pong/

Microsoft Copilot AI Coaching Bot

- Created an AI-powered coaching assistant using Microsoft Azure and OpenAI.

- Link: https://ntuthukomaphalala.github.io/ai-coaching-bot/

TechGuard IT Solutions Website

- Developed a professional IT solutions website with cloud-based integration.

- Link: https://ntuthukomaphalala.github.io/techguard/

PowerApps Lifestyle Survey App

- Designed a survey app for collecting and storing data integrated with SharePoint and automated workflows using Power Automate.

ICFR Smart Automation System

- Built Home Assistant automation integrating Sunsynk inverters and sensors for real-time data monitoring.

PowerApps Inspection App

- Developed a digital inspection app to streamline and record field inspections at ICFR. (Microsoft login required)

Portfolio Website

- Developed a personal responsive portfolio showcasing professional work.

- Link: https://ntuthukomaphalala.github.io/portfolio/

GitHub Portfolio

- Repository for additional programming and data science projects.

- Link: https://github.com/ntuthukomaphalala

CERTIFICATIONS

- FNB App Academy 2025 Certificate – Itvarsity – July 2025
  Successfully completed intensive training in software development, programming, and application design.

- 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

- Azure Cloud Architect – Deviare – 2023

BADGES

- Network Access Basics – Cisco Networking Academy – 2025
  Covered essential concepts of network access, including switching, VLANs, and wireless access points.

- Networking Basics (22 hours) – Cisco Networking Academy – 2025
  Gained foundational knowledge of networking including IP addressing, routing, and network protocols.

- Getting Started with Cisco Packet Tracer – Cisco Networking Academy – 2025
  Completed hands-on simulations for network setup, configuration, and troubleshooting.

REFERENCES

Available upon request.