

# Tshimbiluni Theophilus Nedambale

AI/Software Engineer

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## Profile

Results-driven **Software Engineer** with hands-on experience across backend development, data engineering, and AI-powered solution design. Proficient in Python, Django REST Framework, and FastAPI, with proven ability to build secure, scalable APIs and integrate them with modern frontends like React (TypeScript). Experienced in applying **DevSecOps**, **CI/CD**, and **cloud deployment** best practices to deliver production-ready systems. Currently expanding into **AI/ML engineering** leveraging Azure OpenAI, LangChain, and orchestration frameworks to build intelligent applications that bridge software and data science. I'm known for analytical thinking, attention to detail, and a collaborative mindset that drives innovation and continuous learning. Passionate about developing solutions that combine strong software architecture with machine learning to create real-world impact.

## Professional Experience

Nov 2025 – Present  
Fourways, Sandton,  
South Africa

### Fluid

*Junior Python Developer*

- **Developing and optimizing AI-powered invoice automation systems** using OpenAI models and Datalab for intelligent data extraction and processing.
- **Implementing asynchronous task processing with Celery in Django applications** to improve automation workflow efficiency and system responsiveness.
- **Contributing to the enhancement of document processing pipelines**, integrating machine learning capabilities to automate manual invoice handling processes.
- **Collaborating with the automation team to design and refine extraction logic**, ensuring accuracy and reliability in production invoice processing systems.
- **Working with Django backend infrastructure to support scalable automation solutions** that streamline business operations.

Jul 2025 – Nov 2025  
Sandton City, South Africa

### Sasol Ltd

*Graduate trainee II/Junior AI/Software Engineer*

- **Co-developed and refined a celebratory digital screens message app** for Sasol's 75 Year milestone, delivering a visually engaging and technically robust solution recognised by executive leadership for innovation, precision, and collaborative excellence.
- **Co-developed the SHE AI chatbot**, an AI-powered knowledge assistant for Safety, Health, and Environment (SHE) data, enhancing employee access to governance documents and safety insights across mining and operations sites.
- **Contributed to the development of AI-driven digital solutions** within the Innovation Enablement team, supporting automation and software engineering initiatives.
- **Organised and led agile stand-ups and peer coding sessions** to foster collaboration and accelerate technical learning.
- **Participated in the integration of secure development tools** like Snyk into GitHub workflows, enhancing code quality and vulnerability detection.
- **Supported the design and review of operational dashboards**, contributing to data-driven decision-making and performance tracking.
- **Redeveloped the internal crowdsourcing platform** by transitioning from a legacy .NET web application to a modern stack using Django for the backend and React for the frontend, improving scalability and user experience.
- **Applied DevSecOps principles in project workstreams**, aligning with enterprise standards for secure and scalable software delivery.
- **Initiated and facilitated technical learning sessions**, demonstrating leadership and a proactive approach to skill development.
- **Promoted AI tools such as Microsoft 365 Copilot** during enablement events, advocating for adoption and showcasing practical use cases.

Aug 2024 – Jul 2025  
Sandton City, South Africa

### Sasol Ltd

*YDP Candidate(Full-Stack Developer Intern)*

- **Designed and maintained** secure, scalable RESTful APIs using Django REST Framework and Python.
- **Integrated** server-side logic with React (TypeScript) frontends for smooth, full-stack application functionality.
- **Developed** a real-time voice chat prototype using FastAPI (backend) and React (frontend) with Azure OpenAI for live AI-powered interactions.
- **Embedded AI features** by integrating ChatGPT with DALL-E and Bing for advanced, dynamic chatbot functionality.
- **Migrated databases and infrastructure** from local clusters to Azure using Azure Kubernetes Service (AKS), enabling cloud-native scalability and reliability.
- **Implemented CI/CD pipelines** with Azure DevOps and GitHub, improving deployment speed and maintaining consistent delivery quality.
- **Enhanced application security** with DevSecOps practices using tools like Snyk (vulnerability detection) and SonarQube (code quality).
- **Monitored and optimized performance** with New Relic to ensure reliability of backend services and AI features.
- **Defined AI architecture patterns** in collaboration with management and architecture teams, setting standards for future integrations.
- **Promoted Microsoft 365 Copilot** at the IM GenAI Event, showcasing benefits and driving adoption.
- **Participated in innovation events** such as the ServiceNow Hackathon and Microsoft's AI Discovery Day, contributing to collaborative problem-solving.

May 2024 – Jul 2024  
Sandton City, South Africa

### Nedbank

*YES Youth Intern - Data Team*

- **Gained end-to-end exposure** to the full data lifecycle within Nedbank's CIB data team—from data discovery and ingestion to product delivery.
- **Designed and developed a PowerApp** to streamline data request submissions, improving team productivity and tracking.
- **Documented data lineage and governance processes**, supporting compliance efforts and ensuring data traceability.
- **Created onboarding documentation** outlining key data roles (BA, DA, DQA, DE, DM), improving team workflow clarity and new member ramp-up.
- **Shadowed Data Quality Analysts** during Enhanced Quality Assessments (EQA), gaining hands-on understanding of data integrity checks and quality assurance.
- **Collaborated on data lineage projects** under BI analyst mentorship, enhancing knowledge of data accuracy, governance, and regulatory alignment.
- **Strengthened technical and analytical skills** through hands-on involvement in real-world data management and governance processes.

Mar 2023 – Jun 2023  
Potchefstroom, South Africa

### North-West University

*Lecturer Assistant*

- Assisted students with tutorials and practical sessions, focusing on programming concepts and problem-solving.
- Evaluated assignments and tests, ensuring accuracy and consistency in grading.

## Education

Jan 2020 – Dec 2023  
Potchefstroom, South Africa

### Bachelor of Science in Information Technology

*North-West University*

## Certificates

- Microsoft Certified: Azure Fundamentals ☐
- Microsoft Certified: Azure AI Fundamentals ☐

## Skills

### Soft Skills

Analytical Thinking, Critical Thinking, Communication, Team Collaboration, Emotional Intelligence, Attention to Detail, Time Management, Adaptability, Curiosity & Continuous Learning, Professionalism

### Technical Skills

SDLC principle, Data Structure and Algorithm, Object-oriented Programming, Python, API Design, Azure Devops, CI/CD, Azure, Clean Architecture, Data Quality, Devops, Django, Docker, Front-end, Git, Github, Kubernetes, Machine Learning, Microservice, Microservice Architecture, New Relic, Postgresql, Django REST Framework, Restful API, SOLID Principles, Sonarqube, SQL

## References

**Vusi Sithole**, *Digital Platforms and Innovation Lead*, Sasol Ltd  
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**van Wyk Marnus**, *Software Engineering Lead*, Sasol Ltd  
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