

THULISILE VILAKAZI

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PROFILE

Final-year Software Engineering student at WeThinkCode_ specialising in Data Engineering. Experienced in building data pipelines and scalable applications using Python, SQL, and Java on Linux/Unix systems. Skilled in database design, algorithms, and object-oriented programming, with a strong foundation in debugging and collaborative Agile development. Seeking opportunities to design data infrastructure and backend systems that deliver meaningful business impact.

EDUCATION

WeThinkCode_ Cape Town, South Africa
Diploma in Software Engineering (NQF 6) 2024 – Present

- Hands-on, project-based programme focused on software development, teamwork, and problem-solving.
- Gained proficiency in Java, Python, SQL, Git, Docker, and Linux/Unix systems.
- Applied Agile methodologies, Test-Driven Development (TDD), and version control in real-world projects.

University of Cape Town (UCT) Cape Town, South Africa
Bachelor of Laws (LLB) 2017 – 2022

- Developed analytical thinking, research methodology, and structured problem-solving through legal case analysis and academic writing.

TECHNICAL SKILLS

Programming Languages: Python, Java, SQL, Bash, HTML/CSS

Frameworks & Tools: Django, Git, GitHub, Docker, Maven, Pandas

Databases: PostgreSQL, SQLite

Systems: Linux/Unix (command line, shell scripting, system administration)

Core Competencies: Algorithms, Data Structures, OOP, Debugging, Problem-Solving

Development Practices: Agile Scrum, Test-Driven Development (TDD), CI/CD, RESTful API Development

Additional Exposure: AWS fundamentals, Cybersecurity principles, AI/ML concepts

KEY PROJECTS

Mukuru Loyalty Rewards Hub — Django Web App 2025

- Developed during Mukuru x WeThinkCode_ SheHacks Hackathon; achieved **2nd place overall**.
- Built gamified rewards platform with user authentication, points system, and real-time leaderboards using Django and PostgreSQL.
- Implemented RESTful APIs for customer engagement tracking and deployed functional MVP within 48-hour deadline.

ArrowRoute (Bus Schedule App) — Python Backend 2024

- Built automated backend system parsing PDF bus timetables into structured CSV data using Python and Pandas.
- Implemented data validation logic and efficient search algorithms for real-time schedule queries.
- Designed modular architecture with clean code principles and comprehensive error handling.

FraudLens AI — Data & Cybersecurity Project 2025

- Researched AI-driven fraud detection systems, focusing on anomaly detection algorithms and data preprocessing pipelines.
- Analysed transactional datasets to identify patterns indicative of fraudulent behaviour.
- Applied Python for data analysis and explored machine learning approaches for scalable security solutions.

UbuhleLegal (Legal Education Platform) — Django Web Application

2024 – Ongoing

- Building full-stack Django application providing accessible information on South African customary marriage law.
- Designed RESTful APIs, PostgreSQL database schema, and user-friendly navigation with focus on accessibility.
- Managing project lifecycle from requirements gathering through deployment using Agile methodologies.

PROFESSIONAL EXPERIENCE

WeThinkCode_

Jan 2025 – Present

Front Desk Assistant

Cape Town, South Africa

- Serve as first point of contact for students, visitors, and industry partners, representing the organisation at recruitment events and campus activities.
- Provide administrative and logistical support for daily campus operations, coordinating events and maintaining accurate student records.
- Facilitate communication between students, technical staff, and external stakeholders in fast-paced tech education environment.

University of Cape Town

Jan 2019 – Dec 2019

Front Desk Coordinator

Cape Town, South Africa

- Managed team of 14 front desk assistants, providing training, performance oversight, and coordinating schedules to ensure continuous coverage.
- Acted as primary liaison between residence management, students, and staff, handling escalated inquiries and resolving issues promptly.
- Oversaw administrative operations including student record management, maintenance tracking, and event logistics for residence programmes.

University of Cape Town

Jan 2018 – Dec 2018

Front Desk Assistant

Cape Town, South Africa

- Provided administrative support to staff, students, and parents in university residence environment with professionalism and efficiency.
- Maintained residence records, handled in-person and telephonic inquiries, and supported event planning and logistics.

CERTIFICATIONS

SANCS25 — Southern Africa–Netherlands Cyber Security School (2025)

OPSWAT Introduction to Critical Infrastructure Protection (2025)

Google Foundations of Cybersecurity (2025)

Microsoft AI Fluency (2025)

WeThinkCode_ GenAI for Software Engineers (2025)