Thapelo Ndlovu

BSc Computer Science & Applied Mathematics

Parktown, Johannesburg

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Profile

Computer Science and Applied Mathematics graduate with a strong foundation in software engineering, data structures, and algorithms. Experienced in designing and implementing secure, reliable, and user-focused applications using modern frameworks. Skilled in translating requirements into maintainable, testable, and scalable code. Demonstrated ability to collaborate effectively across teams, communicate clearly, and adapt to changing project needs. Seeking to contribute to a high-performing development team by delivering robust and efficient software solutions with attention to detail and long-term maintainability.

Technical Skills

Programming: Python, JavaScript, TypeScript, SQL, Java, C, C++

AI & Data: OpenAI API, LangChain, Pandas, NumPy, Data Wrangling, Visualization, Prompt Engineering

Frameworks & Tools: React, Node.js, Express, MongoDB, PostgreSQL, Docker, Git, Azure, Vercel

Web Development: RESTful APIs, HTML/CSS, Tailwind CSS, React Components, CI/CD Workflows

Other: Analytical Thinking, Attention to Detail, Problem Solving, Teamwork, Adaptability

Experience

Programming and Mathematics Tutor – University of the Witwatersrand   *2023 – 2025*

- Guided students in Python programming, algorithms, and mathematical problem-solving with a focus on clarity and precision.
- Simplified complex technical and analytical concepts for diverse audiences to enhance understanding and application.
- Promoted collaborative problem-solving and the use of structured, maintainable coding approaches.

Freelance Developer & AI Enthusiast   *2023 – Present*

- Designed and deployed full-stack web applications using the MERN stack with emphasis on usability, security, and fault tolerance.
- Developed lightweight AI-driven tools leveraging Python and OpenAI APIs for summarization and automation.
- Implemented containerized deployments (Docker) and Git-based CI/CD pipelines to improve system reliability and maintainability.

Education

University of the Witwatersrand, Johannesburg   *2022 – 2025*

Bachelor of Science in Computer Science & Applied Mathematics

Key Modules: Machine Learning, Databases, Software Design, Operating Systems, Computer Graphics, Cryptography, Group Theory, Real Analysis

Centre of Science and Technology (COSAT)   *2018 – 2021*

National Senior Certificate (with Distinctions) – Mathematics, Physical Sciences, Information Technology, Biology

Online Presence

GitHub: github.com/Heisenburg-z

Portfolio: thapelotech.vercel.app

LinkedIn: linkedin.com/in/thapelo-ndlovu-1165152aa/