

Ntshuxeko Mathebula

Software Engineer

Sunninghill, Sandton // South Africa // 063 531 7818 // ntshuxekom@ncmatpro.com // www.ncmatpro.com
// www.linkedin.com/in/ntshuxeko-mathebula

PROFILE

Collaborative and purposeful software engineer with experience as a web developer on JOBVINE, consultant – Customer Success Engineer and Junior Consultant – Software Engineering at Opti-Num Solutions. I specialize in front-end and full-stack websites using React.js, Next.js, MongoDB, HTML, CSS, Figma, and Tailwind CSS, as well as web and standalone applications in MATLAB using Web App Server and MATLAB Compiler. I also build end-to-end reporting dashboards with MATLAB, Python and MS SQL Server and have expertise in API development, third party integrations, chat application development and automation.

EXPERIENCE

CONSULTANT – CUSTOMER SUCCESS ENGINEER

Opti-Num Solutions // Hybrid // Feb 2025 - Present

Support and expand the Adoption of MathWorks tools in academic and research institutions.

JUNIOR CONSULTANT – SOFTWARE ENGINEERING

Opti-Num Solutions // Hybrid // Aug 2023 – Jan 2025

Contribute to client-facing projects through software engineering, support business development funnel through workshops and application engineering. Complete project tasks on time and in-budget.

ACHIEVEMENTS + HIGHLIGHTS

- **Project Adoption:** Designed and deployed web application using MATLAB, Web App Server automated data fetching features, the app is now actively used in finance meetings to streamline reporting and decision-making.
- **Ongoing Enhancement Win:** Designed and built automated reporting framework. Successful implementation led to the client requesting additional features, leading to further development and billable work.

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- **Creative Reporting Automation:** Built automated reporting framework that is interoperable with MATLAB using Python. Followed SE best practices, used OOP, unittest framework and class-based testing in Python.
 - **Business Development:** Developed and presented simulation and optimization demos using MATLAB and Simulink to potential clients.
 - **Leadership:** Manage and oversee support cases by assigning tasks, tracking progress, and ensuring timely resolution. Function as point of escalation, providing guidance and assistance to team members while maintaining clear communication and updates in CRM.
 - **Financial Modelling:** Modeling and analyzing loan impairments using Monte Carlo Modelling in MATLAB.

FREELANCE WEB DEVELOPER (FRONT-END AND FULL-STACK)

JOBVINE // Remote // Feb 2024 – Present

Collaborate with clients in understanding requirements.

Design and develop web applications for clients. Complete project tasks on time and in-budget.

ACHIVEMENTS + HIGHLIGHTS

- **Full-Stack development of Google Gemini Clone** using Vite, React.js, Tailwind CSS with Google API integration.
- **Front-End development of Ecommerce Landing Page** with seamless animation using Vite, React.js, Tailwind CSS and Framer Motion.
- Front-End development of Real Estate Landing Page.
- **Full-Stack development of an AI Image Generator App** leveraging OpenAI, Express.JS, React.js and Tailwind CSS with OpenAI API integration.
- **Fron-End development of a high-performance 3D Portfolio Website** with sleek animation features using Three.js and GSAP in React.
- **Full-Stack development of Ecommerce Website** with authentication, payment and database management features and an admin dashboard

leveraging React, MongoDB, Express.js and Node.js.

GRADUATE SOFTWARE ENGINEER

Opti-Num Solutions // Hybrid // Feb 2023 – Jul 2023

Contribute to client-facing projects through Software Engineering, supporting business development funnel through workshops and application engineering. Complete project tasks on time and within budget.

ACHIEVEMENTS + HIGHLIGHTS

- **Automated Reporting:** Developed and deployed automated reporting script with UI features leveraging MATLAB, HTML and CSS for processing logic and report styling. Reduced data processing and report generation duration from hours to <5 minutes.
- **WhatsApp Business Chatbot:** Designed, developed, and deployed WhatsApp Business Chatbot with API integration and database integration leveraging Ngrok, Meta, MySQL, and Python.
- **Data Analytics:** Data processing, analysis and visualization in MATLAB resulting in insight contributing to decision-making in Telecom.
- **Growth and Development:** Advanced skills in OOP, Class-based testing, testing frames such as pytest and unittest in Python as well as the unittest framework in MATLAB.
- **Machine Learning and Predictive Modelling:** worked on ML model development, applying data driven techniques to analyze patterns, optimize predictions and improve decision-making. Utilized ML frameworks and algorithms in MATLAB to refine model accuracy and performance.
- API Development
- Software Integration

BI Graduate

Fraser Alexander // Rustenburg, Nort-West //

Sep 2022 – Jan 2023

Develop and maintain applications on MS Power Apps,

collaborate with superintendents and operators. Identify risks and inefficiencies in workflows in the plant and creating tailored solutions to optimize the workflows. Designing and Maintaining PowerBI dashboards.

EDUCATION

BSC (HONOURS) IN ENGINEERING (METALLURGY AND MATERIALS) **University of the Witwatersrand // Braamfontein, Johannesburg // 2022**

Completed rigorous program focused on properties and performance of materials with emphasis on metallurgy, materials science, and engineering applications. Gained analytical thinking, complex problem-solving, programming, interpersonal, time management and teamwork skills.

ACHIEVEMENTS + HIGHLIGHTS

- **Distinctions and Awards:** Mathematics II, Thermodynamics (YOS 1 and 3)
- **Honors:** Member of the House Committee (YOS 1)

SKILLS + INTERESTS

Skills

- **Programming and Scripting Languages:** HTML, CSS, JavaScript, MATLAB, Python
- **Frameworks and Libraries:** React.js, Three.js, GSAP, Tailwind CSS, Next.js, Flask, Node.js, Express.js, RESTX, Flask-RESTful
- **Databases and Data Management:** MS SQL Server, MongoDB, Appwrite, MySQL
- **Tools and Platforms:** VSC, GitLab, GitHub, SourceTree, Docker, Figma, MATLAB Web App Server, MATLAB Compiler SDK
- **Software Development Practices:** TDD, OOP, code profiling and optimization, code refactoring and debugging.
- **Application Development and Testing**
- **Data Analytics and Reporting:** Data Processing, Analysis and Visualization
- **Soft Skills:** Diligence, strategizing, collaboration, problem-solving, analytical thinking, proactivity, agility, teamwork, communication

Interests

- AI // Web Development // Web Design // Mobile Application Development // React Native // Flutter // Figma