

MICHELLE NHENGU

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FULL STACK WEB DEVELOPER | AI & NLP | DOCKER | FLASK

Full Stack Developer with hands-on experience building scalable, data-driven web applications. Skilled in modern frontend technologies and Python-based backends. Passionate about integrating AI, NLP, and automation into real-world systems. Adept at containerization with Docker and deploying applications on cloud platforms.

TECHNICAL SKILLS

Frontend: React.js, JavaScript (ES6+), HTML5, CSS3, TailwindCSS, Responsive Design **Backend:** Python, Flask, Node.js, RESTful APIs, JSON **Database:** MySQL, MongoDB, SQLite **DevOps & Tools:** Docker, Git/GitHub, Postman, VS Code, Render, Heroku **AI & NLP:** TF-IDF, Cosine Similarity, Scikit-learn, Pandas, NumPy, NLTK **Other Skills:** MVC Pattern, CRUD Operations, API Integration, Data Visualization (Recharts)

PROJECTS

Resume Screener (Python, Flask, NLP, TF-IDF) Developed a Flask-based web app ranking resumes by job description similarity using TF-IDF and cosine similarity. Automated PDF text parsing, optimized preprocessing pipelines, and improved ranking accuracy by 35%. Deployed with Docker for isolated testing and scalability.

Tech Blog Platform (Flask, HTML, CSS, JS)

Built a fully functional blogging platform with admin dashboard to create, edit, and delete posts. Integrated event management, image upload, and responsive frontend layout. Added authentication, dark mode, and dropdown navigation using JavaScript.

E-Commerce Web App (React, Flask, MySQL)

Designed a responsive UI with dynamic product listings, cart, and checkout functionality. Developed REST API backend for inventory and user data management. Deployed using Docker containers for reproducibility and easier cloud deployment.

Data Visualization Dashboard (React, Recharts, Flask)

Created a visual analytics tool with multi-filter support (Sector, Country, SWOT, etc.). Integrated backend API with live filtering and mobile-friendly charts. Added a sidebar layout, card-based visualization, and dark mode toggle.

EDUCATION

BSc Computer Science – Rabindranath Tagore University, Bhopal (Expected Graduation: June 2026)

RESEARCH WORK

Conducting research on:

- 1. Explainable AI (XAI):** Using SHAP or LIME to interpret ML model predictions for ethical AI research.
- 2. Lightweight AI Models for Edge Devices:** Exploring model compression and pruning techniques to make AI models mobile-friendly.

CERTIFICATIONS

AWS Cloud Technical Essentials - Coursera

ACHIEVEMENTS

Delivered 4+ complete full-stack projects integrating backend, AI, and frontend UI. Optimized NLP pipeline for document matching, achieving 0.85 similarity precision. Contributed to open-source discussions on Flask and Python web development.

SOFT SKILLS

Analytical Thinking | Attention to Detail | Team Collaboration | Problem Solving | Remote Communication