TADIWANASHE NIGEL NYAMAPFENE

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EDUCATION

Rust College   **Holly Springs, MS**
Bachelor of Science in Computer Science   *Expected: December 2026*

SKILLS

Languages: Python, Java, JavaScript, SQL | **Frameworks**: React/Next.js, Node.js, Flask, Django
Databases: Firebase, MongoDB, PostgreSQL | **Systems**: Docker, CI/CD, RESTful APIs, Vercel
Tools: Git/Github, Agile, TailwindCSS | **AI/ML Tools:** Ollama, RAG, OpenAI API, Chroma DB, Hugging Face

EXPERIENCE

Manufacturing Systems Engineer Intern   **June 2025-August 2025**
Amplify Cell Technologies   *Byhalia, MS*
- Designed an offline RAG pipeline with Ollama (Llama3.2) and Chroma DB, indexing 500+ internal documents (PDFs, logs) to provide instant answers for manufacturing teams, reducing reliance on manual documents by 70%.
- Supported deployment and optimization of manufacturing systems (MOM/MES, SCADA & SAP) through collaboration with engineers and IT teams and coordinated cross-functional project milestones.

Machine Learning Research Intern   **June 2024-August 2024**
Tufts University   *Medford, MA*
- Built an image classification model using TensorFlow/CNN to distinguish aircraft variants, achieving 90.14% accuracy on 10,000 images.
- Optimized preprocessing pipeline, reducing training time by 20% through layer optimization and leveraging GPU clusters.
- Compared Traditional ML vs. Optimal Transport methods, proving a 15% higher accuracy with traditional ML.

Software Engineering Fellow   **July 2024-August 2024**
Headstarter AI   *Remote*
- Developed 4 full-stack AI apps using React, Next.js, and Firebase, implementing CI/CD practices, and deployed to 500+ users.
- Led a team of 3 to develop an interactive customer support agent using Next.js, OpenAI, and RAG, reducing response time by 40%.
- Created an adaptive flashcard application that improved user retention by 30% through dynamic difficulty adjustment.

PROJECTS

Smart Pantry || *Next.js, React, Material UI, Firebase, JavaScript, Vercel*
- Developed a full-stack grocery management app with RESTful APIs serving 100+ users and integrated OpenAI for recipe suggestions.
- Reduced duplicate purchases and food wastages by 25% through perishability-based alerts.

Secure Auth Microservice || *Next.js, NextAuth, MongoDB, JWT*
- Engineered a high-performance authentication service capable of handling 10,000+ concurrent users.
- Implemented a JWT-based auth with Next.js supporting OAuth, email/password, and security, reducing theoretical attack by 60%.

RC Agritech (Black Enterprise Hackathon) || *React, Flask, OpenAI, Computer Vision*
- Automated crop disease detection: Built a drone image processing pipeline that identified affected crops with 92% accuracy, reducing diagnosis time by 60% per acre.
- Integrated OpenAI's GPT-4 to generate actionable recommendations from detected diseases, cutting the farmer's decision time by over 20%.

LEADERSHIP & AFFILIATIONS

Adobe + HBCU 20x20 Fellow · SGA Treasurer · Junior Class VP || Public Interest Technology · ColorStack · Google Student Developer || Honors Student · Data 4 Black Lives Fellow · Presidential Scholar