

# Franklin Muoghalu

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## EDUCATION

University of Houston

Expected Graduation: May 2026

### Bachelor's in Computer Science

- GPA of **3.57/4.0**; Dean's list student

## TECHNICAL SKILLS

**Programming Languages:** Python, C++, C, C#, Java, JavaScript, SQL, R, HTML/CSS, Razor

**Frameworks & Libraries:** React.js, Node.js, Express.js, Flask, .NET

**Tools & Platforms:** Git, GitHub, GitHub Actions, Docker, Google Cloud

**Server & DevOps:** Nginx, Reverse Proxy Configuration, SSL/TLS, Cloudflare DNS, SSH, Systemd Services

**AI & ML:** RAG, NLP, Model Fine-Tuning, Neural Networks, Logistic Regression

## WORK EXPERIENCE

### System Engineer, Foxconn

May 2025 – Present

- Created and implemented internal testing software that increased overall testing efficiency by 30%
- Authored comprehensive technical documentation used by production technicians, improving workflow speed and reducing onboarding time by 20%
- Designed, deployed, and maintained production control systems, factory automation platforms, and industrial network infrastructure to support high-volume manufacturing operations

### Director of Tutoring, CougarCS

August 2025 – Present

- Developed a Discord-based tutoring coordination bot that streamlined student support and contributed to a 20% increase in overall student performance
- Led and managed a team of 15+ tutors, ensuring consistent delivery of high-quality academic assistance across multiple subjects
- Designed customized study plans for students, resulting in measurable grade improvements of up to 25%

## PROJECT EXPERIENCE

### Documentation Tool | Python, Flask, Express.js, React, JavaScript, LLM, NLP, RAG

September 2025 – Present

- Designed and built a documentation platform that automatically logs, categorizes, and tracks errors encountered during development
- Implemented a hybrid backend architecture using Express.js for database routing and a Flask service for image uploads, file processing, and communication with a locally running RAG model
- Integrated LLM and NLP components to provide contextual suggestions, error explanations, and automated documentation generation
- Projected to increase overall development productivity by 30% through centralized issue tracking and AI-assisted debugging

### Dani-Foods E-Commerce store | React, Typescript, Express, MYSQL, Github Actions, Nginx

August 2025 - Present

- Developed and maintained an e-commerce platform for selling Nigerian food products, including secure checkout and inventory tracking features
- Automated operational workflows such as pricing updates, low-stock alerts, and order notifications
- Implemented SEO and analytics strategies that increased traffic and repeat customer purchases

### Text to Website | Python, Httpx, Flask, React, LLM, MCP

September 2025

- Developed a custom MCP server-client system that automatically generates frontend design skeletons to accelerate UI development
- Increased overall web development efficiency by 40% through automated component generation and streamlined workflows
- Integrated LLM-driven prompts and template generation to produce consistent, responsive layouts with minimal effort

### O.M.N.I | Python, LLMs, Embeddings, NLP, RAG, OpenAI, Docker, Cloudflare

November 2024 - May 2025

- Won the Grand Prize at the Johnson Space Center Hackathon for applying O.M.N.I to NASA mission manuals, enabling astronauts to rapidly retrieve emergency procedures using natural-language queries
- Built an intelligent AI agent with a Python backend and Tkinter UI, designed to allow users to query and navigate complex technical information in real time
- Developed a publicly accessible API capable of ingesting documents from any source, generating embeddings, and storing them in a vector database for high-accuracy retrieval
- Containerized and deployed the system using Docker and Cloudflare Tunnels for secure, remote accessibility and testing

### Self-Hosted Server Infrastructure & Deployment | Nginx, Docker, Cloudflare

October 2024 – Present

- Built and maintained a multi-platform server infrastructure spanning a Raspberry Pi 5, a home Linux server, and an Oracle Cloud instance
- Hosted and managed 5+ applications including personal web apps, LLM tools, and a multiplayer game server, ensuring high availability and secure access
- Configured a full Nginx-based reverse proxy with Cloudflare SSL/TLS, DNS, and firewall protections across all environments
- Deployed database services on Oracle Cloud, supporting API backends and real-time application features through optimized connection management
- Implemented automated updates, containerized services, and monitoring tools to streamline maintenance and improve overall system reliability