Onyekachukwu Franklin Muoghalu

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Education

University of Houston — Houston, TX

Bachelor of Science, Computer Science — **Expected Graduation: May 2026**

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

Technical Skills

Languages:Python, C/C++, C#, Razor, JavaScript, HTML/CSS, R, Java, SQL
Frameworks: React, Node.js, Flask, .NET
Developer Tools: Git, Google Cloud Platform, VS Code, Visual Studio, PyCharm
AI & Machine Learning: NLP, OpenAI API (Embedding Models, GPT Models), LLM Integration, RAG Models

Work Experience

Tutor, Scholars Enrichment Programs, University of Houston — January 2024 – Present

- Provided 1:1 detailed instructions to 4+ students weekly on calculus, and data structures
- Developed customized study plans resulting in a 25% increase in grade improvement

Project Experience

Syallabi-buddy | Python, Flask, HTML, CSS, JavaScript, LLM, NLP — August 2024 – Present

- Built a full-stack web application using Flask backend and integrated Google Calendar API for event scheduling.
- Automated syllabus parsing to extract key dates and assignments, adding them directly to users' calendars.
- Designed a user-friendly interface for uploading syllabi and customizing calendar updates.

F.I.N.D | Python, LLM, Embedding Models, NLP, AWS polly, ChromaDB — January 2025

- Received an Honorable mention at the Texas A&M Hackathon (TAMUHACK) for co developing the Fast Information Navigation through Documents i.e F.I.N.D
- Developed as an AI agent that uses documents given by the user to answer queries from the user.
- Uses amazon web services to allow communication between the user and the agent
- Used the Arize software to boost efficiency of the agent by 50%

O.M.N.I | Python, LLM, Embedding Models, NLP, Open-AI — November 2024

- Won the grand prize at the Johnson space center Hackathon(JSC Hack) for co developing the Operational Manual Navigation Interface i.e O.M.N.I
- Developed as an AI-agent with Python as the back-end and Tikinter as the front-end to assist astronauts doing space exploration during emergencies.
- Designed another program to process space shuttle manuals and create embedding vectors for a vector database.

Personal Web and Game Server Development | Node.js, Nginx, — October 2024

- Built and managed server infrastructure for hosting 5+ websites and game servers.
- Set up and configured a secure web server using Nginx, Cloudflare SSL, and Node.js backend.
- Deployed the server on both Windows and Linux environments, customizing Nginx configurations for each platform.

Simulating Clocktimes | C++ — September 2024

- Simulated CPU and user process scheduling using a priority queue, differentiating between high-priority and low-priority events.
- Designed event-driven mechanisms to handle time slices, user interactions, and SSD operations in real-time.
- Implemented time-sharing logic to ensure equitable CPU allocation among processes, improving system responsiveness by 20%.
- Utilized C++ to build the simulation, incorporating process management, queues, and event handling.
- Tested and validated the simulation with various input scenarios to ensure accurate and reliable performance.

Leadership Experience

Director of Tutoring, Cougar CS, University of Houston — January 2025 – Present

Events Coordinator, Cougar AI, University of Houston — January 2025 – Present