

Olisemeka Nmarkwe

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EDUCATION

Southeastern Louisiana University <i>Bachelor of Science, Computer Science, Concentration: Data Science</i>	Hammond, LA
	May 2026

- Achievements:** Thirteen Club (Top GPA), Honors Scholarship, Student Leader of International Student Union
- Coursework:** Machine Learning, Data Structures, Algorithms, Statistics, Cloud Computing

EXPERIENCE

AI Intern <i>Dialysis Care Center</i>	May 2025 – Aug 2025
	Remote
<ul style="list-style-type: none">Engineered production-ready RAG pipelines using PyTorch to streamline patient interaction workflows, ensuring strict adherence to healthcare data governance and compliance standards.Architected a semantic vector search engine (FAISS) with optimization techniques to modernize legacy knowledge retrieval, significantly reducing query resolution time for medical staff.Collaborated with cross-functional teams to integrate LLM-based autonomous agents, implementing guardrails to eliminate hallucinations in high-stakes clinical environments.	
Student Engineer <i>Southeastern Northshore STEM Center</i>	Aug 2025 – Present
	Hammond, LA
<ul style="list-style-type: none">Lead technical enablement workshops, translating complex hardware architecture and AI concepts for non-technical audiences to drive customer engagement.Engineered computer vision pipelines for NVIDIA Jetson-powered robots, applying quantization to optimize custom machine learning workflows for real-time edge processing.Designed and deployed autonomous navigation systems using PyTorch models, benchmarking object detection algorithms to showcase hardware capabilities to stakeholders.	
Research Assistant <i>Southeastern Louisiana University</i>	Aug 2024 – Dec 2024
	Hammond, LA
<ul style="list-style-type: none">Implemented end-to-end data acquisition protocols and preprocessing pipelines for high-fidelity EEG signals, ensuring reproducibility of scientific results.Trained and evaluated classical ML classifiers (SVM, KNN, Decision Trees) to validate novel biometric identifiers, applying advanced data augmentation to handle sparse biological datasets.	

PROJECTS

Inferno Computer Vision <i>YOLO11n, Quantization, NVIDIA A100 (Cloud), iOS</i>	May 2025
<ul style="list-style-type: none">Provisioned a high-performance NVIDIA A100 SXM (80GB) cloud instance to train a custom YOLO11n model on a 160k+ image dataset, optimizing hyperparameters for rapid convergence.Applied post-training quantization to the model, achieving ultra-low latency inference on constrained edge devices and successfully porting the detection system to run natively on iOS.Designed a searchable event database and tracking system, presenting the edge-optimized architecture to the IAB to demonstrate scalable security solutions.	
PragBase <i>Flask, HTMX, RAG, Embeddable Widget</i>	Aug 2025
<ul style="list-style-type: none">Architected a universal RAG assistant using Flask and HTMX that ingests agnostic data sources (PDFs, URLs, Raw Text), converting them into a vector-searchable knowledge base.Developed a lightweight, JavaScript-based widget enabling users to embed the AI agent into any external website with a single script tag, delivering dynamic interactivity with minimal load.Optimized backend retrieval utilizing Dockerized microservices, ensuring secure data isolation and sub-second response times for concurrent user sessions.	
Paokinator <i>FastAPI, PostgreSQL (Supabase), Railway</i>	Oct 2025
<ul style="list-style-type: none">Engineered a probabilistic guessing game (Akinator clone) utilizing a FastAPI backend and Supabase PostgreSQL to efficiently query over 100k+ character datapoints.Deployed the full-stack application on Railway using CI/CD pipelines, optimizing database connection pooling to handle high-concurrency global traffic.Implemented a self-correcting fuzzy logic algorithm that dynamically updates decision weights based on real-time user feedback, automating data accuracy improvements.	

TECHNICAL SKILLS

Languages: Python, C++, Java, JavaScript, SQL, PHP
AI/ML & Vision: PyTorch, TensorFlow, YOLO11, OpenCV, RAG, LangChain, Hugging Face, LLMs, Quantization
MLOps & Infrastructure: Docker, AWS, GCP, FastAPI, Flask, HTMX, PostgreSQL, Railway, Distributed Training, Linux