# Olisemeka Nmarkwe

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## Education

**Southeastern Louisiana University** Hammond, LA

*Bachelor of Science in Computer Science, Concentration: Data Science* *May 2026*

- GPA: 3.72 / 4.00
- Honors Scholarship, EXCEL Scholarship, President's List (2022–Present)

## Relevant Coursework

**Core CS:** Data Structures and Algorithms, Operating Systems, Database Systems, Discrete Mathematics, Computer Architecture, Software Engineering, Statistics

**Data Science:** Data Mining, Machine Learning, Computer Vision

## Experience

**Research Assistant - EEG Data Collection and Analysis** Aug 2024 – Dec 2024

*Southeastern Louisiana University* *Hammond, LA*

- Collected and analyzed EEG data from over 10 participants, supporting ML-based brainwave classification research
- Performed statistical analysis and extracted trends across 5+ feature categories using Python and MNE
- Collaborated with 3 researchers and documented insights for publication and model refinement

**Software Developer Intern** May 2024 – Aug 2024

*Dialysis Care Center* *Remote*

- Developed a dynamic UI using HTML, CSS, and JavaScript with AJAX for patient site interfaces
- Built a chatbot using ChatGPT API and increased response rate by 30% in test environments
- Created a dashboard using PHP to monitor 5+ endpoints with real-time ping health status

## Projects

**Fire and Smoke Detection System** | ***YOLO, OpenCV, Flask, Telegram API, Pygame*** 2025

- Trained a YOLOv5 model on 160,000+ images; achieved 80.4 mAP@0.5 for fire/smoke detection
- Implemented real-time alerts under 3s via Telegram Bot API and integrated audio alarms via Pygame
- Optimized detection pipeline using NCNN and deployed on Raspberry Pi 4 (RAM: 8GB)
- Enabled live web monitoring using Flask; processed 200+ frames per minute

**EEG Signal Classification System** | ***TensorFlow, Scikit-learn, MNE, Pandas*** 2024

- Developed a neural network classifier for EEG signals with 85%+ accuracy on test set
- Benchmarked ANN vs Decision Tree, KNN, and SVM models using F1-Score and Confusion Matrix
- Preprocessed EEG signals using MNE; extracted 5+ statistical and frequency domain features

## Technical Skills

**Programming Languages:** Python, JavaScript, C#, SQL

**Statistics & Data Analysis:** Descriptive & Inferential Stats, Hypothesis Testing, Regression (Linear/Logistic)

**Data Insight Extraction:** Derived insights from 10,000+ row datasets using Pandas, NumPy, Seaborn

**Machine Learning:** ANN, SVM, Decision Trees, Feature Engineering, Precision-Recall Evaluation

**Tools & Libraries:** Pandas, NumPy, Scikit-learn, TensorFlow, OpenCV, MNE, Seaborn, Matplotlib, HuggingFace, YOLO, NCNN

**Platforms & Tech:** Flask, Git, Oracle Apex, XAMPP, Telegram API, IoT, Dashboards, SEO

**Soft Skills:** Technical Writing, Data Storytelling, Analytical Thinking, Research Collaboration, Problem Solving, AI literacy