

ENOCK OWUSU ANSAH

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EDUCATION

Grambling State University – Grambling, Louisiana, USA May 2028
Major: Computer Science **Honors:** President's List **GPA:** 4.0
Relevant Coursework: Data Structures and Algorithms, Software Methodology, Database Management, Discrete Structures, Systems Programming, Computer Architecture, Machine Learning, Object-Oriented Programming

WORK EXPERIENCE

Machine Learning Research Intern, *Louisiana State University* May 2025 - Jul 2025

- Built an end-to-end machine learning pipeline in Python to classify emotional states from **EEG data**, achieving **92%+** accuracy using **Gradient Boosting**, **Random Forest**, and **SVM models** on a dataset of 9,000 samples.
- Engineered preprocessing workflows to clean and scale **high-dimensional brainwave data (alpha, beta, gamma)** and implemented feature importance analysis to identify top spectral predictors.
- Applied **dimensionality reduction (t-SNE)** and **data visualization techniques** to interpret model behavior, supporting real-world applications in **mental health monitoring and affective computing**.

Computer Lab Assistant, *Grambling State University* Oct 2024 - Present

- Diagnosed and resolved **100+** technical issues per semester for lab users by troubleshooting **hardware**, **OS**, and software problems across **40+** Windows-based machines.
- Improved system security and compliance by implementing scheduled antivirus scans and enforcing university IT access control protocols, resulting in zero security incidents during the academic year.
- Configured lab systems with key academic software (e.g., **Visual Studio**, **MATLAB**, **Adobe Creative Suite**), improving student accessibility and coursework efficiency.

Software Engineer Intern | Database Team, *Environmental Protection Agency (Ghana)* May 2024 - Jul 2024

- Boosted query performance by **10%** in the agency's environmental monitoring platform by redesigning complex SQL queries and indexing key tables, enabling faster insights for data-driven decision-making.
- Automated routine data cleaning tasks using **Python scripts**, reducing manual processing time by over **20%**.
- Collaborated with a cross-functional team to refactor **database schema**, reducing data redundancy by **25%** and improving reporting accuracy.

PROJECTS

Enoxify - AI-Powered Accessibility Platform | *Python, React, TypeScript, OpenAI API, FastAPI, gTTS, Three.js* [Project Link](#)

- Developed a comprehensive full-stack web application that makes complex information accessible through AI-powered text simplification, multi-language text-to-speech, speech-to-text transcription, and intelligent document processing using OpenAI GPT-4 and Whisper APIs.
- Built a responsive React frontend with TypeScript, implementing real-time audio recording, dynamic playback speed control, and a beautiful 3D interactive background using Three.js with glass-morphism effects and tab-based navigation.
- Integrated multiple AI services including OpenAI for intelligent text analysis and translation, Google Text-to-Speech for native language pronunciation, and document processing for PDF/Word files with audio output and simplified text generation.

PyGit | Python, SHA-1, File I/O, argparse, Data Structures [Project Link](#)

- Recreated Git's core internals in Python, including object serialization, commit trees, and HEAD tracking logic.
- Built a modular CLI tool using argparse to support Git commands with persistent object storage and ref resolution.
- Engineered SHA-1 hashing and custom file I/O structures to manage versioned blobs and enable file restoration.

Georim App | Team Project | *React Native, TypeScript, Firebase, Google Maps API* May 2025

- Developed a full-stack mobile app for event organizers to auto-check in attendees based on proximity using GPS radius.
- Integrated Google Auth, real-time location checks, and ad-style product promotion feeds similar to TikTok/Instagram.
- Designed a smooth multi-screen navigation flow for login, event creation, attendee tracking, and checkout.

SKILLS

Languages: Python, JavaScript, TypeScript, Java, C, SQL, HTML/CSS

Technologies/Frameworks: React.js, Node.js, Express.js, Nest.js, MongoDB, GitHub, Firebase

Developer Tools: Git, VS Code, PyCharm, Linux, Google Cloud Platform, Figma, Canva, Eclipse, Android Studio

CAMPUS INVOLVEMENT

National Society of Black Engineers (NSBE) (Professional Development Chair), **African Student Association (ASA)**, **Alpha Lambda Delta (ALD)**, **Brilliant Black Minds (BBM)**, **Chess Club**