

Emmanuel A. Oppong

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EDUCATION

Grambling State University

Grambling, LA

Bachelor of Science in Computer Science, Minor in Mathematics, GPA: 4.0

Expected Graduation May 2028

- Relevant Coursework: Data Structures & Algorithms, OOP (C++), Operating Systems, Computer Networks, Databases,*Computer Architecture, *Programming Language Concepts (*In Progress)

TECHNICAL SKILLS

Languages: C++, Python, JavaScript, HTML, CSS, Java, C, Swift, TypeScript, Bash

Frameworks: React, Flutter, FastAPI, Django, Flask, Node.js, Spring Boot

Tools: Docker, Kubernetes, Git, Linux, CI/CD, MySQL, PostgreSQL, MongoDB, Vercel, Firebase.

EXPERIENCE

Software Engineer Intern — Backend

Dec 2024 – Mar 2025

Opay Ghana

- Integrated PayStack API using Flask and MySQL to enable payment processing for **7** local businesses.
- Optimized backend queries and workflows, improving response speed and reliability in production by **20%**.
- Deployed and maintained microservices using Docker and Kubernetes to ensure high system availability.

Frontend Developer Intern

Oct 2023 – Jun 2024

Bismuth Technologies

- Developed client dashboards in Flutter/Dart, enabling over **5K** mobile users to interact with business data.
- Connected over **5** mobile apps to Firebase, ensuring real-time data sync across user platforms.
- Implemented analytics features in Java for client demos, aiding product validation and releases.

Software Engineer Intern — Backend

May 2023 – Aug 2023

Kehillah Global Limited

- Developed CRUD applications for an investment platform API using Django, delivering core data management.
- Integrated error logging with Sentry.io and Slack alerts, reducing incident detection time by **10%**.
- Implemented CI/CD with GitHub Actions, enforcing test passage on all pull requests.

PROJECTS

GSU Pathway | Python, Django, PostgreSQL

[Project Link](#)

- Developed a 4-year degree plan generator with course conflict-detection algorithm for GSU students; integrated with the university catalog API and adopted by **500+** students, reducing advising time by **15%**.
- Automated PDF report generation for student plans, streamlining the academic advising process.

CampusNav: Real-Time Transit API | Redis, Docker

[Project Link](#)

- Built a scalable backend service using Redis caching to process real-time GPS data, achieving **<100ms** response times and improving ETA accuracy by **30%** for **5,000+** students.
- Designed a load-tested WebSocket endpoint to efficiently push location updates to thousands of concurrent clients.

Drawing App | Next.js, TypeScript, Convex, Liveblocks

[Project Link](#)

- Engineered a real-time collaborative whiteboard with multi-user cursors and live drawing synchronization, deploying the full-stack application on Vercel with a Convex backend for persistent data storage.
- Implemented room-based access controls, allowing users to create and share private collaborative canvases.

HackGSU 2024 Winning Project | Next.js, PostgreSQL, Drizzle ORM, Convex

[Project Link](#)

- Won 1st Place Overall in a 36-hour hackathon by building a full-stack Duolingo-inspired platform.
- Engineered a responsive frontend with React and Tailwind CSS, deployed on Vercel for global accessibility.
- Added gamified Duolingo-style sound effects and confetti animations, boosting user engagement by **10%**.

LEADERSHIP AND PROFESSIONAL DEVELOPMENT

Teaching Assistant: Intro to Computer Science I,II, Calculus I,II

Affiliated Organizations: ACM(Vice-President), ColorStack, CodePath, Brilliant Black Minds (Karat), NSBE, IET