Furnom Samuel Dam

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EDUCATION

University of Maryland, Baltimore County (UMBC) Baltimore, Maryland

Bachelor of Science in Computer Science Graduating*: May 2026*

Organizations: National Society of Black Engineers, Codepath.

TECHNICAL SKILLS

Languages: Python, C/C++, JavaScript, Go, SQL, C#, TypeScript.
Frameworks: Flask, React, Tailwind, Gin, FastAPI, Node, Express, GraphQL, NextJS.
Databases: MongoDB, Redis, MySQL.
Tools: Git, Docker, Linux, AWS, Jira, Jest, Unittest, Postman, Swagger, Railway, GCP, Vercel, GitHub Actions.

PROJECTS

GEPO Dec 2025 - Jan 2026.

- Built a GitHub analytics platform using Next.js, Node.js/Express, GraphQL, MongoDB, and Redis; automated Docker deployments to Cloud Run via GitHub Actions and frontend to Vercel.
- Designed the platform to surface GitHub contribution and repository activity with low-latency queries, prioritizing fast feedback over exhaustive data processing.
- Instrumented Redis caching, achieving a consistently high cache hit rate (>95%), reducing GitHub API calls and improving response times.
- Developed 68 Jest unit tests for middleware, services, and APIs, ensuring production-ready coverage.

Accessibility-Map Sept 2025 - Dec 2025.

- Collaborated in a 4-person engineering team to build a campus-wide accessibility navigation system focused on reliable routing for students and visitors with mobility needs.
- Built backend authentication, threshold logic, and MySQL/MariaDB schema for 300+ accessibility nodes (doors, elevators, paths), enabling accurate routing across 17+ campus buildings.
- Integrated FastAPI backend with the JS frontend and transitioned all services to Railway production APIs; resolved CORS, routing, and building-validation bugs to stabilize full-campus navigation.
- Improved reliability and performance in production, processing 614+ API calls with <200 ms latency, <120 MB memory, and 0% error rate after final fixes.

Studivio June 2025 **-** July 2025.

- Developed a full-stack study productivity and note-taking app designed to help students organize notes and break down complex material, using Flask, React, and MongoDB with JWT authentication.
- Integrated OpenAI GPT, Whisper, and AssemblyAI APIs to process PDFs (≤ 60 pages / 25 MB) and audio files (≤ 1 hour / 50 MB) with near-instant summarization, enabling students to break down complex concepts into actionable points.
- Instrumented backend performance with Prometheus to monitor latency and errors in long-running AI workflows and improve reliability.

Chip8Emulator Feb 2025 - May 2025.

- Built a CHIP-8 emulator in C, implementing all major opcodes, memory, timers, and input handling.
- Used SDL2 to render 64x32 monochrome graphics and mapped user keyboard input to CHIP-8's hexadecimal keypad.