

Jake Amaral

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EDUCATION

University of Florida

*B.S. in **Computer Science** and Minor in **Economics***

Gainesville, FL

Aug. 2024 – May 2028

- **GPA:** 3.52
- **Relevant Coursework:** Prog in C++, Prog in Python, Discrete Structures, DSA
- **Member** - Kappa Sigma Fraternity
- **Member** - Association for Computing Machinery

EXPERIENCE

Software Engineering Intern

Safe Cities NPO | E-Portfolio

May – July 2026

Cape Town, South Africa

- Led a team of 4 to develop a full-stack project management platform for a staff of **30+** people
- Implemented features using Next.js, TypeScript, PostgreSQL, Supabase, and Drizzle ORM, integrating Clerk authentication, role-based access, and Google OAuth 2.0/Calendar APIs
- Collaborated with fellow UF students in South Africa to translate nonprofit operational requirements into a secure, responsive application, gaining a broader perspective on global software development and cross-cultural collaboration through **direct cultural immersion**

Information Technology Support Assistant

West Morris Mendham Highschool

Nov. 2023 – June 2024

Mendham, NJ

- Diagnosed and repaired student and staff laptops by collecting devices from school charging stations, troubleshooting hardware/software issues, and resolving submitted IT support tickets
- Provided direct technical support to **hundreds of students** and faculty through an IT help desk, troubleshooting computer issues and guiding users through solutions
- Maintained and redistributed the school's laptop fleet by cleaning, inspecting, organizing, and preparing devices for reassignment while collaborating with the IT team to keep equipment operational

PROJECTS

Spatial Math | *C Sharp, Unity*

April 2026 – Present

- Built a real-time 3D graphing calculator in Unity and C Sharp that compiles user-typed equations into executable functions supporting variables, nested functions, operator precedence, and implicit multiplication
- Developed procedural mesh generation that samples equations across a configurable grid of **3,700+ vertices**, triangulating them into a colored, height-mapped surface rendered using Unity's core Mesh API
- Added a feature where clicking any point on the graph shows the slope and a matching flat tangent plane at that spot
- Currently laying the groundwork for a virtual reality version that helps students explore math visually

Enterprise Decision Making (EDM) AI Hackathon Entry | *IBM Watsonx Orchestrate*

Feb. 2026

- Using **IBM's Watsonx AI Agent Builder**, created a workflow of multiple agents to support business decision-making and governance
- Developed specialized agents to extract key request details, inconsistencies, potential policy concerns from a file of **60+** synthetic data points
- Designed an audit-able decision review process that improves consistency and transparency while keeping final decisions under human control

TECHNICAL SKILLS

Languages: Python, C/C Sharp, PostgreSQL, HTML

Frameworks: Next.js, React, Tailwind, shadcn, Drizzle ORM

Developer Tools: GitHub, Vercel, Supabase, Clerk, Unity

LANGUAGES & INTERESTS

Languages: English (Native), Spanish (Intermediate High), Portuguese (Basic)

Hobbies: Golf, Electronic Music Production, Baseball, Travel