

# GABRIEL BARRETO OTERO

786-626-6323 | barretgaby12@gmail.com |  
linkedin.com/in/Gabriel-B-Otero |  
github.com/luxx12

## EDUCATION

---

- **University of Central Florida** Orlando, FL  
*B.S. in Computer Science | GPA: 3.7* May 2029

## EXPERIENCE

---

- **Web Development Intern** Jul 2023 – Aug 2023  
*Miami EdTech, Miami, FL*
  - Assisted in development and testing of visual-recognition and educational software; boosted actionable user feedback by **27%**.
  - Researched integrations and benefits of STEM curriculum packages; co-authored a proposal targeting outreach to **30+** Miami-Dade schools.
  - Completed a Python certification at the conclusion of the internship.
- **Game Design Teaching Assistant** Aug 2023 – May 2025  
*John A. Ferguson Senior High, Miami, FL*
  - Coordinated and developed year-long course structure and weekly assignments for seven classes of **40+** students.
  - Led instruction in C#, JavaScript, and Unity; guided students through full game-dev pipelines.
  - Evaluated coursework, provided feedback, and supported lab sessions at scale.
- **Secretary of JAF CSHS** May 2023 – May 2025  
*Computer Science Honor Society, Miami, FL*
  - Placed **3rd** as a team at USF's *CyberLaunch Hackathon*.
  - Led a **team** to **2nd** place at the *2023 CSTA Hackathon* (FIU) with an Internet-safety awareness project.
  - Delivered workshops on C#, JavaScript, Java, and cybersecurity to cohorts of **30–50** students.
  - Accrued **\$20,000+** in combined team hackathon awards across multiple events.

## PROJECTS

---

- **NeuroView | HTML, CSS, JavaScript, Three.js, FastAPI, WebSockets** Jan 2026
  - Project won **Best User Design** at **SwampHacks XL**, recognized for its intuitive, accessible interface for complex medical imaging.
  - Built a web-based 3D MRI/NIFTI brain viewer with sub-minute uploads, interactive rotation, slicing across all planes, and depth/opacity controls.
  - Implemented 3D annotation tools using **Three.js** raycasting and optimized rendering for large volumetric datasets to ensure smooth performance.
  - Led front-end development of a Google Docs-style collaborative UX, enabling up to **4 users** to simultaneously view, annotate, and explore the same scan in real time.
- **Kinexis | Python, Flask, OpenCV, MediaPipe, SQLite, ReportLab** Oct 2025
  - Developed at **KnightHacks VIII** as part of a **team of 4**; won **Best App** award.
  - Full-stack web application enabling physical therapists to assess patient Range of Motion (ROM) via computer vision.
  - Implemented real-time motion tracking using **MediaPipe** and **OpenCV** to capture and analyze limb movements.
  - Engineered database architecture with SQLite to store angle measurements and automated medical report generation with ReportLab.
  - Reduced typical ROM assessment time from **15–20 minutes to under 5 minutes**; requires only laptop and webcam for accessibility.
- **Ping | C++, Qt, Asio, TCP Networking** (Work in Progress)
  - Developing a C++ TCP-based chat system using **Asio** to handle asynchronous client-server communication between multiple users.
  - Implementing a scalable backend architecture for message routing, connection management, and reliable data transmission.
  - Integrating the networking layer with **Qt**'s event-driven framework, enabling real-time message handling within a desktop GUI.

## TECHNICAL SKILLS

---

- **Languages:** C/C++, C#, Python, Java, JavaScript, HTML/CSS, GDScript, Ruby, SQL
- **Frameworks/Engines:** React, Next.js, Qt Node.js, Flask, Unity, Godot
- **Developer Tools:** Git, Sourcetree, Google Cloud Platform, VS Code, Visual Studio, Eclipse, Chrome DevTools
- **APIs/Libraries:** Google Gemini API, Chrome Extensions API, OpenCV, MediaPipe, NumPy, Pandas, ReportLab