

Carlos E. Lopez

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EDUCATION

University of Central Florida
Bachelor of Science in Computer Science

Orlando, FL
Aug. 2024 – May 2028

EXPERIENCE

Undergraduate Research Assistant March 2025 – Present
UCF Analytics, Decision, and Control Lab Orlando, FL

- Currently developing a prototype addon for *Microsoft Flight Simulator* to integrate **real-world flight data** and simulate historical flight paths.
- Contributing to ongoing research efforts to improve simulation fidelity for training and safety analysis.

Administrative Assistant Intern Aug. 2024 – Sept. 2024
Traveling Aura Mobile Spa Davie, FL

- Organized and managed event data for **20+** partnership opportunities, drafting professional correspondence to support business outreach.
- Developed digital marketing strategies that boosted social media engagement by **15%** during internship
- Conducted research on industry trends, identifying **10+** actionable insights to enhance business efforts.

Retail Associate Nov. 2022 – Oct. 2023
Hollister CO Sunrise, FL

- Delivered exceptional customer service go **50+** customers daily in a fast-paced retail environment.
- Guided customers through product selection, increasing upsell opportunities and improving sales metrics.
- Supported inventory restocking of **75+** items per shift, maintaining a fully stocked and organized sales floor.

PROJECTS

Riffs | *React, TypeScript, Tailwind, FL Studio, Next.js, Pitchy* April 2025

- 1st Place Winner** for **Best App Dev** at Bitcamp 2025.
- Built a music app converting hummed melodies into guitar tabs with real-time note detection and interactive gameplay.
- Implemented a camera system to overlay visual guidance onto the user's guitar, assisting with finger positioning.
- Integrated **Pitchy API** for real-time pitch detection and **FL Studio** for key extraction.
- Developed responsive frontend components delivering a sleek, smooth user interface.

Kmodo | *React, Tailwind, TypeScript, Next, tRPC, Drizzle, PostgreSQL* Jan. 2025 – Present

- 1st Place Winner** of Knight Hacks Spring 2025 Projects Program.
- Developed a centralized dashboard to streamline hackathon event creation, organization, and participation.
- Constructed user input forms and frontend UI components using **React** to improve event management
- Collaborated with the team to integrate frontend components with backend services, ensuring responsiveness

Personal Portfolio | *React, Tailwind, TypeScript, Next, Last.fm* Feb. 2025 – Present

- Developed a personal portfolio website to showcase my technical journey.
- Designed responsive design with **Tailwind** for an optimized user experience across devices.
- Leveraged **Last.fm API** to display dynamic music listening data, demonstrating API usage and frontend integration.
- Built using **React** and **Next.js** to deliver fast, seamless performance and optimized user experience

Project Diablo | *Lua, Roblox Studio* May 2025 – Present

- Building a Roblox game blending high-speed movement and combo combat inspired by *GunZ* and *DMC*
- Lead development team by organizing workflows and managing project progress to meet milestones
- Designing and implementing core player movement mechanics to enhance gameplay fluidity

TECHNICAL SKILLS

Programming Languages: Python, C, C#, HTML, CSS, JavaScript, TypeScript, Lua

Libraries/Frameworks: React, Next, Tailwind, .NET, ClerkAuth, Uploadthing

Tools/Platforms: Windows, Linux, Vercel, Railway, Node, Github, Git VSCode, Blender, Figma, VirtualBox, Unity