



✉ carlo.fraley@gmail.com

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Portfolio: <https://www.carlofraley.dev/>

EDUCATION

University of Florida, Herbert Wertheim College of Engineering | Gainesville, FL

Computer Science Student | B.S./M.S. Combined Degree Expected BS May 2027 | Expected MS May 2028

» Current GPA: 4.0 | Honors Program

SKILLS

Languages: C++, Python, Java, JavaScript

Frameworks/Tools: React, Next.js, Tailwind CSS, shadcn/ui, SQL, PostgreSQL, Drizzle ORM, Better Auth, Git, Vercel

Core Competencies: Object-Oriented Programming, Algorithm Design, Systems Programming, Database Design, Agile/Scrum Development, Full-Stack Web Development

Soft Skills: Leadership, Communication, Analytical Problem Solving, Team Collaboration, Adaptability

CERTIFICATIONS

- Top Secret Clearance (Polygraph)
- Artificial Intelligence Fundamentals and Applications – University of Florida -Dec 2025
- CompTIA Security+ (SY0-701) – July 2025

COURSEWORK/PROJECTS

RELEVANT COURSES:

- Data Structures and Algorithms, Computer Organization, AI Fundamentals, Discrete Structures, Computational Linear Algebra, Problem Solving with Computer Software, Introduction to Software Engineering, Engineering Statistics, Information and Database Systems, Operating Systems, Business Analytics and AI, Human-Computer Interaction, Algorithm Abstraction and Design, Intro to VR.

PROJECTS:

- **Verdant - Environmental Risk Mapping Platform - Developer** | *Next.js, TypeScript, React, PostgreSQL, Clerk, Google Maps API, OpenAI API, Drizzle ORM, Vercel*
 - » Co-developed an interactive web app that visualizes U.S. county-level environmental risks, utilizing a scalable serverless PostgreSQL database via Neon and Drizzle ORM.
 - » Built a responsive UI with Tailwind CSS and shadcn/ui, integrating Google Maps and OpenAI APIs with secure backend authentication.
- **MaxWash - Interactive 3D Web Car Wash Simulation** | *Unity, C#, WebGL, URP*
 - » Engineered an interactive 3D simulation in Unity, deployed to the web via WebGL. Developed C# scripts for complex mechanics, including a dynamic day/night cycle and precise physics-based tool interactions.
 - » Utilized the Universal Render Pipeline (URP) and custom shaders to deliver real-time visual feedback while maintaining performance across varying browser constraints.
- **WAD File System - Userspace Daemon** | *C++, FUSE API, POSIX, Linux*
 - » Engineered a C++ library and FUSE-based daemon to mount WAD binary files as a functional Linux filesystem, utilizing a hierarchical tree structure.
 - » Implemented low-level POSIX system calls (pread, pwrite, ftruncate) to perform complex data shifting, descriptor management, and real-time lump data manipulation.
- **BankOnFood - Donation Management Platform** | *Next.js, React, Node.js, Express, MongoDB*
 - » Developed a full-stack web application to facilitate donation-matching and inventory visibility for local food pantries. Implemented CRUD operations for secure inventory management and interactive map features.

EXPERIENCE

Health First, Viera Hospital | Melbourne, FL
Surgical Unit-Support Volunteer/ trainer
06/2021 – 04/2023

- Provided logistical and non-clinical support to surgical teams in a fast-paced environment
- Trained incoming volunteers to maintain standards in patient care and hospital protocols.

Children Hunger Project | Melbourne, FL
Director of Events
08/2022 – 05/2023

- Coordinated volunteers and managed donation logistics to support local children in need
- Orchestrated fundraising events and community outreach campaigns, raising \$3,000+ in donations

CLUBS/MEMBERSHIPS

- UF Society of Hispanic Professional Engineers (SHPE) – Member
- UF Association for Computing Machinery (ACM) – Member
- UF Society of Automobile Engineers (SAE) - Gator Motorsport – 2023-2025

HONORS & AWARDS

- UF Dean's List – Fall 2023
- AP Capstone Diploma & AP Scholar with Distinction
- Benacquisto Scholarship Recipient
- UF Presidential Gold Scholarship Recipient

CHECK OUT MY PROFILES:

[GitHub](#) | [in](#)

<https://github.com/Carlo-Fr>

<https://www.linkedin.com/in/carlo-fraley/>