



# CARLO FRALEY

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

## Certifications

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

## Coursework/Projects

### Relevant courses:

- Data Structures and Algorithms, Introduction to Computer Organization, Artificial Intelligence Fundamentals, Discrete Structures, Computational Linear Algebra, Programming Fundamentals, Problem Solving with Computer Software, Engineering Ethics and Professionalism, Introduction to Software Engineering, Ethics, Data, and Technology, Engineering Statistics, Information and Database Systems, Operating Systems, Foundations of Business Analytics and Artificial Intelligence (AI).

### Projects:

- **Verdant** - Environmental Risk Mapping Platform - *Developer* | Next.js, TypeScript, React, PostgreSQL, Clerk, Google Maps API, OpenAI API, Drizzle ORM, Vercel | 2025
  - Co-developed an interactive web app that visualizes U.S. county-level environmental risks using geospatial data. Built a responsive UI with Tailwind CSS and shadcn/ui, integrated Google Maps and OpenAI APIs, and implemented secure backend APIs with Better Auth authentication. Deployed a scalable serverless Postgres database via Neon using Drizzle ORM. Collaborated in an agile Scrum team for iterative delivery.
- **Minesweeper** – Interactive Desktop Application C++
  - Developed a GUI-based desktop application mimicking the classic Minesweeper game.
  - Engineered grid generation and user-state tracking using object-oriented principles.
- **Sudoku** – Python Game with Pygame
  - Co-developed a Sudoku game with real-time input validation and interactive UI.
  - Programmed logical constraint checks and progress tracking for user-friendly experience.
- **MovieMender** - Personalized Movie Recommendation Engine C++
  - Built a high-performance movie recommendation system using parsed IMDb datasets.
  - Optimized custom algorithms for user profiling, data filtering, and relevance scoring.

## Skills

**Languages:** C++, Python, Java, JavaScript  
**Frameworks/Tools:** React, Next.js, Tailwind CSS, shadcn/ui, 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

## Experience

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| Health First, Viera Hospital   Melbourne, FL<br><i>Surgical Unit-Support Volunteer/ trainer</i><br>06/2021 – 04/2023 | <ul style="list-style-type: none"><li>• Delivered logistical and non-clinical support to surgical teams in a fast-paced environment</li><li>• Trained incoming volunteers to maintain standards in patient care and hospital protocols.</li></ul>   |
| Children Hunger Project   Melbourne, FL<br><i>Director of Events</i><br>08/2022 – 05/2023                            | <ul style="list-style-type: none"><li>• Coordinated volunteers and managed donation logistics to support local children in need</li><li>• Orchestrated fundraising events and community outreach campaigns, raising \$3,000+ in donations</li></ul> |

## Clubs/Memberships

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

## Honors & Awards

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| <ul style="list-style-type: none"><li>• UF Dean’s List –Fall 2023</li><li>• Benacquisto Scholarship Recipient</li><li>• UF Presidential Gold Scholarship Recipient</li><li>• National Merit Finalist (2023)</li></ul> | <ul style="list-style-type: none"><li>• AP Capstone Diploma &amp; AP Scholar with Distinction</li><li>• EFSC President’s List – 2023</li><li>• Congressional Recognition for Academic Achievement (2023)</li></ul> |
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