

Joe Cardenas

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EDUCATION

Carnegie Mellon University, School of Computer Science

Pittsburgh, PA

Bachelor of Science in Computer Science – GPA: 4.0

August 2024 – Present

- **Coursework:** Mathematical Foundations for CS, Principles of Imperative Computation, Principles of Functional Programming

Hopkins School

New Haven, CT

Graduated with Cum Laude distinction

September 2020 – June 2024

WORK EXPERIENCE

Carnegie Mellon University

Pittsburgh, PA

15-122 Teaching Assistant

January 2025 – Present

- Handled administrative tasks such as grading, course infrastructure, and facilitating communication between professors and students.
- Helped students complete practice problems and met with students individually during open office hours.

Endeavour Inspired Infrastructure

Darien, CT

GIS and Web Development Intern

June 2023 – August 2023, June 2024 – August 2024

- **Global Infrastructure Map:** Developed new user interfaces, managed product deployment, and integrated real-time energy pricing data and analysis into the infrastructure map using Mapbox, React, and WMS.

PROJECTS

Memeinator iOS App: An open-source iOS app to create layered and complex transformations to text using Swift and SwiftUI, with a landing page built in SolidJS.

StatShot iOS App: A golf statistics and practice app built with Swift, SwiftUI, and SwiftData.

Hydroponics Robot: A robot to manage hydroponic plants using custom hardware and software developed in C++ and Javascript, presented in an easy-to-use web UI.

Homelab: A personal server that uses Docker and other deployment techniques to host web pages, databases, game servers, and many other experiments. I use this machine to try new video codecs and other media tech.

8-Bit Computers: One 8-bit computer constructed from scratch using only simple ICs, and one 8-bit computer architected around the 6502 CPU. Each was hand-built on a breadboard and programmed in assembly or raw binary instructions.

Trabant Flat Ride: A scale, working model of a Trabant Flat Ride created for the Ride Engineering Competition. Working with a team of about 6 engineers, I worked on electronics, controls, and ride programming.

LEADERSHIP

Pathfinder

New Haven, CT

Teaching Fellow

September 2022 – June 2024

- Created 8th-grade math lesson plans and led classes through new learning and example problems.
- Guided students one-on-one through practice problems and taught topics not covered in class.

SKILLS

Languages: Swift, JavaScript, TypeScript, Java, C, Rust, Python

Technologies: React, Firebase, Redis, SwiftUI, SwiftData, SQL, Breadboarding, Digital Electronics

Interests: Consumer Electronics (Computers, VR, A/V Equipment), Economics, Roller Coasters & Entertainment Technology, LEGO, Chinese Language