

Christian Diaz

Amherst, MA | christiangdiaz2@gmail.com | Personal Portfolio | LinkedIn | GitHub

Education

University of Massachusetts Amherst | Commonwealth Honors College

Amherst, MA

Bachelor of Science in Computer Science

August 2024 – May 2027

- **Relevant Coursework:** Algorithms; Artificial Intelligence; Software Engineering; Web Development; Data Structures; Probability & Statistics; C Programming

Professional & Technical Experience

Cytrence

Burlington, MA

Embedded Systems Intern

Jun 2026 – Aug 2026

- Engineered Python QA automation around a hardware-control SDK to validate keyboard, mouse, USB, and video paths across physical computing systems.
- Developed OpenCV-based calibration and correlation algorithms mapping device input to observed screen movement while rejecting noisy, off-axis, clipped, and ambiguous measurements.
- Built cross-platform Windows and Linux hardware validation workflows with device detection, reconnect handling, trace logging, cancellation, and reproducible peripheral testing.
- Developed a BIOS/UEFI automation system that profiles firmware interfaces, identifies requested settings, plans navigation paths, and executes validated input sequences through the hardware-control stack.
- Integrated OpenCV visual analysis, semantic retrieval, and a local Gemma model with deterministic routing, state verification, safety gates, and recovery logic for reliable navigation across varying pre-OS interfaces.

Pelican Point East

Naples, FL

Freelance Full-Stack Developer

2024 – Present

- Independently designed and developed a production full-stack portal for a condominium association, owning client requirements, UI design, implementation, deployment, and ongoing maintenance.
- Built secure resident and administrative experiences for association documents, financial reports, notices, and community resources while supporting Florida document-access requirements.
- Implemented authentication, role-based permissions, document uploads and publishing, metadata management, categorization, filtering, sorting, responsive interfaces, structured SEO data, and ongoing client-requested features.

Learning Resource Center, UMass Amherst

Amherst, MA

Supplemental Instruction Leader – CICS 110: Foundations of Programming

Aug 2025 – Jan 2026

- Led two weekly peer-learning sessions and created review materials and debugging exercises for a foundational programming course serving 200+ students per semester.
- Collaborated with faculty and applied active-learning, inclusive-teaching, and informal-assessment techniques to strengthen student problem-solving and conceptual understanding.

BUILD UMass

Amherst, MA

Software Developer

Sep 2024 – Present

- Developed AI-powered backend search functionality to improve access to legal documents for the New England First Amendment Coalition.
- Led migration of BUILD's website from legacy JavaScript/HTML to Next.js, TypeScript, and Tailwind CSS, modernizing the codebase and responsive user experience.
- Built backend tooling supporting client discovery and outreach for a student-run software consultancy serving external organizations.

Leadership & Activities

Manning Undergraduate Student Impact Council

Amherst, MA

Committee Lead

Aug 2024 – May 2026

- Collaborated with CICS leadership on student-wellbeing and academic initiatives, providing undergraduate perspective on programs and policy affecting the college community.
- Led development of a faculty podcast connecting students with CICS research, career paths, and faculty perspectives.

Technical Skills

Languages: Python; TypeScript; JavaScript; Java; C; HTML/CSS

Frameworks & Development: Next.js; React; Node.js; FastAPI; Tailwind CSS; Git; Docker

Computer Vision, ML & Platforms: OpenCV; Hugging Face; sentence-transformers; Gemma; Pandas; Linux; Firebase; AWS

Languages Spoken: English and Spanish (native fluency)