

Evan Cedeno

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EDUCATION

University of Wisconsin-Madison

B.S. in Computer Engineering and Computer Science

Madison, WI

Expected May 2028

- GPA: 3.82/4.0 | Dean's Honor List (4x)
- Coursework: Signals & Computation, Microprocessor Systems, Circuit Analysis, Operating Systems, Linear Algebra, Algorithms (Accelerated Honors), Machine Learning in Physics

PROJECTS

Infusinator™ | Patent-pending

C++ | FreeRTOS | Altium

- Invented a patent-pending smart wearable device and a supporting software platform that automates intravenous medication usage logging
- Designed a custom PCB in Altium around the ESP32-C6 microcontroller, integrating low-power MOSFET-controlled sleep circuitry, BLE + WiFi connectivity, Hall-effect sensing, and RTC-backed timestamping
- Developed embedded firmware in C++ using FreeRTOS to coordinate real-time sensing, data synchronization, power-state transitions, and telemetry logging on the ESP32 platform
- Built the full-stack platform using SwiftUI, Python, and 3D CAD/printing workflows to enable secure mobile synchronization, cloud-backed data pipelines, and rapid hardware prototyping

WORK EXPERIENCE

Acoustic Sensing and Functional Materials Laboratory

May 2026 – Present

Undergraduate Researcher

Madison, WI

- Lead development of an acoustic tactile sensing platform that enables real-time 2D pressure mapping for next-generation wearable and health applications
- Investigate the relationship between acoustic frequency responses and applied pressure, demonstrating that relative pressure can be inferred from FFT and spectrogram features
- Develop signal-processing techniques to attenuate noise, improving the robustness and responsiveness of real-time acoustic pressure sensing

Marine Robotics Laboratory

May 2026 – Present

Undergraduate Researcher

Madison, WI

- Lead development of an embedded IR-based bearing and range sensing system for a swarm of micro autonomous surface vehicles to enable collaborative task execution
- Evaluate the accuracy of several relative localization algorithms by writing firmware in C++ for sensor acquisition, signal filtering, and swarm synchronization
- Design and optimize a custom PCB in Altium to integrate with the robots operating under strict size, power, and computational constraints

NYC FIRST Robotics STEM Center

July 2025 – August 2025

Intern

New York, NY

- Designed hardware schematics for mmWave sensing and LED guidance systems in a prototype medical crash cart, enabling tool retrieval detection and visual navigation for medical personnel
- Enabled 40 students and 20 educators from city-wide middle schools and high schools to program competition robots for teleoperated control and autonomous task execution through interactive hands-on robotics programming workshops
- Taught block-based programming for drivetrain locomotion, servo-actuated robotic mechanisms, autonomous routines, and encoder + PID feedback control to improve motion accuracy and system responsiveness

HONORS

Apple Career Coaching Scholar

January 2026 – Present

Posse Full Tuition Leadership Scholarship

September 2024 – May 2028

TECHNICAL SKILLS

Languages: C++, Python

Engineering Tools: Altium Designer, LTSpice, FreeRTOS, OnShape, Fusion 360, Git, Arduino IDE, VSCode, Figma

Lab Equipment: Oscilloscope, Multimeter, Soldering Iron, Amplifier, Filter, PCB assembly tools

Other Interests: Cycling, Swimming, Competitive Rubik's Cube solving, Origami, Electric guitar