

Simon Caisse

Computer Engineering student seeking embedded systems internship in Northern California.

Available: Summer 2026 (mid-May)

Website: <https://simoncaisse.com/>

PROJECT SAMPLE

EM Rover Display

2024, 2025 - **GUI for an EM Rover**

Developed a real-time C++ GUI for an EM survey instrument used in professional archaeological fieldwork. The interface features a dynamic GPS-driven map, live signal health monitoring, file management, and instrument configuration. Built with Dear ImGui for an immediate-mode rendering architecture, with state managed via arxiboldi/lager and immer for a functional reactive, immutable data model.

Acoustic Simulator

2026 - **A Physics Engine for Acoustics**

Developed a physics engine with the help of Claude that simulates acoustic waves in C++ featuring changeable resolutions, multiple mediums, and Helmholtz Greens forward solver. Architected state management using the arxiboldi/lager functional reactive library, data structures use the immutable arxiboldi/immer library, with an immediate mode UI built with Dear ImGui.

Forget No More

2021 - **Face recognition paired with reminder lists**

Built an embedded computer vision device on a NVIDIA Jetson Nano that performs real-time facial recognition using Python, OpenCV, and the face_recognition library. On detection, the device shows a personalized reminder list on the integrated display. Hardware integration spans a camera module, Arduino-controlled NeoPixel array, and custom-fabricated steampunk enclosure.

Selected Projects: Laser Cane, Sinusoidal Instrument, Aspasia

EDUCATION

Cleveland State University, Cleveland, Ohio

Candidate for Bachelor of Science in Computer Engineering

AUGUST 2023 - PRESENT Expected graduation: 2027

WORK EXPERIENCE

Ciere Consulting, El Dorado Hills, CA

Summers 2024 - 2025 **Intern**

Developed field instrumentation software for professional archaeological surveys, including the EM Rover Display GUI featured in the projects section. Worked independently and collaboratively to problem-solve, communicate technical plans, and present final designs to stakeholders.

Cleo Health, New York City, NY

Summer 2026 **Intern**

Designed and developed a Role Based Access Control authentication System. Worked with team on design choices and created a system that was testable, adaptable, and well documented.

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SKILLS

Python

C#, C, C++

Java

VHDL

Django

Godot

Blender 3D

Photoshop

3D printing

Claude

SELECTED CLASSES

Computer Organization,
Systems Programming,
Data Structures & Algorithms,
Operating Systems,
Circuits 1&2,
Electronics,
Advanced Digital Systems,
Discrete Mathematics,
Differential Equations,

ACTIVITIES

NCAA Sabre Fencer

Men's Team Captain

SAAC Representative

Cleveland State

Art and Technology

I believe that creativity is one of the pillars to human nature. I harness that creative ability in a variety of ways including photography, philosophy, and programming. An engineer is as much an artist as a problem solver.

