

# DEVAN SOLIMAN

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<https://devansoliman.github.io>

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## EDUCATION

**Stanford University - B.S. in Electrical Engineering**

Expected December 2025

### Relevant Coursework:

- Object-Oriented Programming
- Embedded Systems
- Digital System Design
- Very-Large-Scale Integration
- Hardware Architectures
- Operating Systems
- Electricity and Magnetism
- Circuits & Signal Processing
- Graphics

## SKILLS

**Programming Languages:** Assembly, C, C++, C#, HTML & CSS, Java, LaTeX, MATLAB, Python, SystemVerilog, Verilog

**CAD:** Autodesk Inventor, Cadence Virtuoso Studio, Cadence Xcelium, Siemens Catapult High-Level Synthesis, Synopsys Design Compiler, Vivado Design Suite

## PROJECTS

### Open Action Camera

2022 – present

Created the world's smallest open-source action camera. Building video capturing software, OLED user interface, hot-swappable Li-ion power supply, and 3D-printable, high-durability enclosures compatible with various mounting systems and interchangeable Pi Zero form-factor boards.

### MIPS Processor

2025

Implemented a custom 5-stage MIPS processor using Verilog. Developed the processor's datapath, control unit, arithmetic logic unit, and memory components, ensuring proper execution of MIPS instructions. Integrated pipeline stages for increased throughput and wrote control logic for hazard handling.

### RTL Rasterizer

2024

Synthesized a rasterizer integrated circuit to convert vector graphics (lines, polygons) into raster images for display devices. Features up to 64x multisample anti-aliasing and optimizations to significantly reduce the time to render each triangle, the dynamic power, and the area occupied by the compiled layout.

### Bare Metal Console + Wireless Chat

2022

Built a desktop terminal running bare-metal on ARM. Programmed memory management system, drivers for input and graphics, shell, and commands. Integrated reliable two-way communication platform by writing wireless microcontroller driver, microcontroller firmware, and chatroom application.

## EXPERIENCE

### XR Research Assistant, Virtual Human Interaction Lab (Stanford, CA)

September 2023 – June 2024

- Built interactive XR environments and experiments in collaboration with Stanford researchers and the California Academy of Sciences through Virtual Reality Intensive Training Seminar (VRITS)

### Analog Computing Research Assistant, Stanford School of Engineering

June 2023 – August 2023

- Developed new programming tools (language, validator, compiler) for nontraditional computational platforms aimed at high-speed and high-efficiency applications

### Data Analyst Intern, Hubhub

July 2022 – September 2022

- Wrote software to monitor and visualize the prevalence of the monkeypox epidemic
- Leveraged Amazon Web Services and Microsoft Power Platform to process and store data

## INTERESTS

- 3D-printed skateboards
- DIY laptops
- 24 Hours of Lemons
- Mountain biking
- Tennis
- Ultimate frisbee