

# DEVAN SOLIMAN

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<https://devansoliman.github.io>

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## EDUCATION

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

Expected June 2025

### Relevant Coursework:

- Object-Oriented Programming
- Very-Large-Scale Integration
- Circuits
- Operating Systems
- Hardware Architecture
- Graphics
- Digital System Design
- Electricity and Magnetism
- Mathematical Foundations of Computing

## SKILLS

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

**CAD:** Autodesk Inventor, Cadence Virtuoso Studio, Siemens Catapult HLS, Synopsys Design Compiler, Vivado Design Suite

**Digital Media:** Adobe Creative Cloud (Illustrator, Lightroom, Photoshop, Premiere Pro), Blender, Unity Engine

**Amazon Web Services:** DynamoDB, EC2, Lambda, SageMaker

## PROJECTS

### RTL Rasterizer

2024 – present

Synthesizing a rasterizer integrated circuit. Features up to 16x 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.

### Open Action Camera

2022 – present

Creating an open-source action camera. Designing video capturing software, OLED GUI, hot-swappable Li-ion power supply, and 3D-printable, high-durability enclosures compatible with a range of mounting systems.

### RTL Music Player + Visualizer

2023

Programmed an FPGA into a music player. Player read notes and time values from a ROM and generated sine waves to send to an audio output in real-time. Supported combining simultaneous notes into chords. Expanded functionality included track selection, fast-forward, rewind, and displaying waveforms via HDMI.

### 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.

## TECHNICAL EXPERIENCE

### Board-Level and Physical Design, Open-Source Silicon @ Stanford

May 2024 – present

- Producing an integrated circuit and PCB for a convolutional neural network accelerator that identifies anatomical parts in view of a surgical endoscope

### 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
- Mountain biking
- Cyberdecks
- Tennis
- Stanford Racing pit crew
- Ultimate frisbee