

DEVAN SOLIMAN

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<https://devansoliman.github.io>

EDUCATION

Stanford University - B.S. in Electrical Engineering

Expected June 2025

Relevant Coursework:

- Object-Oriented Programming
- Very-Large-Scale Integration
- Circuits & Signal Processing
- 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 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.

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
- DIY laptops
- Tennis
- Stanford Racing pit crew
- Ultimate frisbee