Devan Soliman

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Education

STANFORD UNIVERSITY – BACHELORS OF SCIENCE IN ELECTRICAL ENGINEERING Dec. 2025
RELEVANT COURSEWORK: Electricity/Magnetism, Semiconductor Devices, Circuits, Digital System Design, VLSI, Hardware Architectures, Operating Systems

Skills

RTL DESIGN + MICROARCHITECTURE
Verilog/SystemVerilog, FSMs, pipelining, simulation, high-level synthesis (Cadence Stratus & Siemens Catapult)

SYNTHESIS + EDA
Synopsys Design Compiler, static timing analysis, Cadence JasperGold, Virtuoso Studio, Xcelium, SPICE, Vivado Design Suite, PPA optimization

EMBEDDED + SOFTWARE
Assembly, Bash, C/C++/C#/SystemC, Git, Java, Linux, Make, MATLAB, Python, Tcl

LAB + PROTOTYPING
additive manufacturing, composites, FPGAs, logic analyzers, oscilloscopes, signal generators, soldering

Experience

LAB ASSISTANT, LAB64 MAKERSPACE (Stanford University) Sept. 2025 – Dec. 2025

- Operated Stanford's electrical engineering makerspace to promote safe and efficient lab usage
- Trained students and researchers in using lab equipment, including power supplies, oscilloscopes, soldering stations, reflow ovens, machine tools, laser cutters, and 3D printers
- Supported users in troubleshooting hardware and prototyping challenges to encourage self-sufficiency and technical confidence

RESEARCH ASSISTANT, VIRTUAL HUMAN INTERACTION LAB (Stanford University) Sept. 2023 – June 2024

- Built interactive virtual/augmented reality experiments using Unity Engine with Stanford researchers
- Created an augmented reality exhibit for prehistoric swamp fauna with the California Academy of Sciences

DATA ANALYST INTERN, HUBBUB July 2022 – Sept. 2022

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

Projects

BRUISER – 3D-Printable Skateboards 2023 – present
Launched a series of high-performance skateboards and longboards designed to be fabricated on desktop 3D-printers and reinforced by a custom carbon fiber laminating process requiring minimal tooling. Currently iterating and field testing an open-source electrification mod and printable wheels. Backed by Stanford Moonshot Club.

ACTIONPI – the World's Smallest Open-Source Action Camera 2022 – present
Building video capturing software, OLED graphical user interface, hot-swappable Li-ion power supply, and high-durability enclosures compatible with various mounting systems and 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.

RASTERIZER IC 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 reduce triangle render time by up to 51%, dynamic power by up to 24%, and area by 41%. Fastest configuration could achieve over 71M triangles per second.