Chad Leino

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EDUCATION

Bachelor of Science in Computer Engineering, December 2026
The University of Alabama,Tuscaloosa, AL
Minor: Math
GPA: 3.25/4.00

- Relevant coursework: Digital Logic, Electronics, C++, Microcomputers, Data Structures and Algorithms

SKILLS

- Programming: C++, Python, Verilog, Bash
- Tools: MatLab/Simulink, HDL Coder, Docker, GitHub, Quartus, Vivado, Fusion 360 CAD
- Systems: Linux, networking, server fundamentals
- Controls: PLC Programming, Ladder Logic, STM32
- Electrical Engineering: Circuit analysis, hardware validation, oscilloscope and bench instrumentation, schematic interpretation

WORK EXPERIENCE

Micro-Fabrication Technician, UA Micro-Fabrication Facility, Tuscaloosa, AL, Oct 2025 - Present

- Create via photolithography circuit components on wafers in a Class 100/1000 cleanroom
- Trained in operation of Karl Suss mask aligner, spin coating, and plasma etcher
- Developed training materials to demonstrate cleanroom protocols to new users

Undergraduate Researcher / Head of Engineering, UA CERN CMS Lab, Tuscaloosa, AL, Oct 2024 - Present

- Wrote Python control scripts for a visual inspection machine, integrated stepper motors and a digital microscope into a combined controllable system
- Tested and validated custom electronic circuit boards using oscilloscopes, multimeters, and bench power supplies
- Devised 1 kV high-voltage safety procedure to satisfy OSHA standards and ensure team safety
- Designed a dry air delivery system to reduce dewpoint below -60 degrees Celsius to protect circuits undergoing cold box testing
- Wrote Python and Bash shell scripts to sort and parse JSON files to extract relevant test data
- Plotted Voltage, Current, and Power of tested boards with Matplotlib for CERN researchers to analyze current batch of circuits

Tutor, Grade Potential Tutoring, Birmingham, AL, Sep 2024 - Apr 2025

- Tutored students in Calculus, Physics, and Computer Science, adapted teaching strategy to student's strengths

PROJECTS

Subsystem Leader, EcoCar EV Challenge, University of Alabama, Spring 2026

- Optimize adaptive cruise control algorithms for stability and responsiveness in an autonomous EV platform
- Design and implement a self-parking system, including path planning and control logic

Student Researcher, FPGA ML Trigger Research - CMS Experiment, University of Alabama, Spring 2026

- Design ML workflows for real time FPGA physics triggers using MATLAB and HDL Coder
- Analyze quantization, HDL generation, and synthesis constraints on AMD/Xilinx FPGAs

EXTRA-CURRICULARS

Member, Precision Timing and Navigation Club / Optica, Sept 2024 - Present

- Collaborated in research experiments in GPS, RTK corrections, demonstrated accuracy gain
- Engaged in discussions on time, physics, and engineering applications of precision timing

Member, University of Alabama REACH, Aug 2024 - Present

- Held meetings to discuss impact of diverse backgrounds on college experiences