

# Kaitlin Lucio

ELECTRICAL AND COMPUTER ENGINEER

3403 Campus Ave, Claremont, CA

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## Education

### Harvey Mudd College

B.S. IN ENGINEERING

GPA: 3.057

Claremont, CA

Aug 2019 - Dec. 2024

## Work Experience

### Design Automation Intern

Remote

BLUE CHEETAH ANALOG

May 2024 -

- Refactored existing RTL and CSR files using a YAML representation influenced by IP-XACT, allowing for quick creation of new designs for clients.
- Added design-agnostic wave database creation and viewing to existing company-wide tool, resulting in quicker test of designs using VCS and Xcelium.

### Clay-Wolkins Fellowship Research Assistant

Claremont, CA

HARVEY MUDD COLLEGE

May 2022 - Present

- Automated testing of processor functionality for OpenHWGroup's processor CWV-Wally using python to invoke test scripts
- Modified existing scripts and testbenches to allow for automated testing of the Linux boot process.
- Rebuilt AHBLite bus' finite-state machine to implement burst mode, resulting in a 2% performance increase.
- Designed tests for a GPIO, PLIC, and UART in RISC-V Assembly and implemented them in SV testbenches to verify processor functionality.

### Digital Design Intern

Claremont, CA

QUALCOMM

Aug. 2023 - Present

- Worked with a team to analyze RTL projects to determine when a project will cause problems in logic synthesis.
- Wrote wrapper script to perform synthesis with Synopsys Design Compiler for RTL Projects to analyze synthesis performance.
- Synthesized projects using yosys to create AND-Inverter graphs in the AIGER format for analysis in Python.
- Used Python to analyze AND-Inverter Graphs for parameters identified to cause synthesis issues such as high logical effort.

### R&D Intern

Westwood, CA

SILVUS TECHNOLOGIES

Jun. 2023 - Aug. 2023

- Characterized the frequency response of an embedded radio using an RF Testbench controlled via MATLAB using VISA commands.
- Built a parser for Synopsys netlists using Python, speeding up detection of transistor issues and saving hundreds of hours of manual searching.
- Automated phase calibration of multi-antenna high-speed embedded radios, allowing for testing and production of phase-calibrated radios.

## Skills

C, Assembly, Analog Circuit Design, SPICE, KiCAD, Linux, Bash, TCL, git, Microsoft Office

## Personal Projects

2024 **Home Media Server**, Docker, Docker Compose, Linux

2023 **FPGA Graphics Card**, SystemVerilog, Breadboarding

## Other Experience

### Humans vs Zombies

Claremont, CA

HEAD MODERATOR FOR HUMANS VS ZOMBIES

Feb. 2022 - Present

- Ran semesterly week-long games of infection tag to bring joy to hundreds of students' lives.
- Led moderation team to write stories and missions and move objects required for the game to event locations.
- Negotiated with college administration to ensure the game will not disrupt other events and would promote a fun environment on campus.