

# Jason Lopez

(661)-670-0534 | [jasonkylopez@gmail.com](mailto:jasonkylopez@gmail.com) | [LinkedIn](#) | [Portfolio](#)

## Education

**University of California, Berkeley**  
Mechanical Engineering: BS

Aug. 2022 - Dec. 2024  
**GPA: 3.54**

**College of the Canyons**  
Math, Engineering, and Physics: AS

Aug. 2020 - Jun. 2022  
**GPA: 3.82**

## Skills

**CAD & Design:** SolidWorks, Creo, OnShape, 3DS Max

**Programming:** Python, MATLAB, Git, LaTeX, Arduino, Simulink

**Manufacturing:** 3D printing, Manual Mill and Lathe, Laser Cutting, Waterjet, Soldering, Wiring & Assembly

## Work Experience

### Mechanical Design Research Intern

Jun 2024 – Dec 2024

Additive Manufacturing and Metamaterials Laboratory

Berkeley, CA

- Pioneered a new mechanical system for an innovative 3D printer with dual projectors for simultaneous multi-material curing.
- Designed key components such as vats, connectors, mounts, and printheads to ensure modular design with interchangeable parts.
- Modeled 3D micro-lattices to test different methods of electroless copper-plating to achieve conductivity inside complex designs.
- Enhanced print speed by over 10x, drastically reducing production time compared to previous multi-material models.

### Instrumentation Research Intern

Jun 2023 – Aug 2023

Lawrence Berkeley National Laboratory

Berkeley, CA

- Conducted ground motion measurements by deploying and calibrating accelerometers across LBNL's Cyclotron.
- Extracted meaningful trends from sensor data using MATLAB, enabling the evaluation of end station viability.
- Identified optimal installation sites for a new microchip printer, maximizing its efficiency and productivity.
- Developed interactive graphical dashboards to effectively communicate findings to current and future engineers at LBNL.

## Projects

### Automatic Chess Board

Aug 2024 – Dec 2024

UC Berkeley Etcheverry Hall

Berkeley, CA

- Developed an automated chess board that enables two players to play remotely without physically moving the pieces.
- Used SolidWorks to design a complete CAD model of the entire system which featured a CoreXY gantry mechanism.
- Created an organized BOM listing all specific components, ensuring streamlined assembly and easy maintenance.
- Optimized hardware and software integration for reliable real-time gameplay, allowing continuous piece movement.

### Adjustable Laptop Stand

Feb 2023 – May 2023

UC Berkeley Etcheverry Hall

Berkeley, CA

- Conceptualized and designed a versatile laptop stand that adjusts and folds compactly using a scissor-mechanism.
- Employed SolidWorks to create a 3D model and detailed CAD drawings for each component, incorporating GD&T standards.
- Assembled a functional prototype using laser-cut sheet metal and 3D-printed parts, demonstrating the product's feasibility.
- Presented the final product to industry experts and faculty leaders at UC Berkeley's Jacobs Design Institute.

### Delay Guitar Pedal

Feb 2024 – May 2024

UC Berkeley Cory Hall

Berkeley, CA

- Engineered schematics and layouts for a delay guitar pedal PCB using KiCad which included an ESP32 and LCD Screen.
- Completed soldering tasks to assemble and integrate passive components onto the PCB board as well as organize wiring.
- 3D Printed a custom case for housing electronic components and peripherals ensuring correct dimensions and tolerances.
- Configured auxiliary inputs, power supplies, foot pedals, and switches for seamless integration into the electronic device.

### Mechanical Keyboard 3D Model

Oct 2023 – Dec 2023

UC Berkeley Etcheverry Hall

Berkeley, CA

- Designed and dimensioned a fully functional mechanical keyboard using CREO, ensuring industry standards.
- Produced 3D models of the keyboard's keycaps, plate, and switches, incorporating accurate dimensions.
- Utilized 3ds Max to produce a short video showcasing the keyboard's exploded view, revealing its intricate inner mechanisms.
- Rendered a visual representation of the keyboard's functionality highlighting the switch's mechanism and keyboard operation.