

Ethan Champion

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Summary

Master of Engineering graduate with 9 years of hands-on technical experience eager to leverage a mechanical engineering role to enable technologies with the potential to make life better for everyone

Experience

Engineering Intern, Palomar Technologies, Inc. *Summers from June 2019 - August 2023*

- Designed 7 custom microelectronics tooling assemblies by communicating directly with customers
- Completed 419 engineering drawings for custom machined parts and in-house assemblies
- Designed and prototyped a custom thermal fuse assembly to safeguard a critical heating element
- Fabricated 1000s of customer parts with specialized microelectronics manufacturing equipment

Master of Engineering Capstone Project in partnership with BurnBot, Inc. *August 2024 - May 2025*

- Designed and prototyped a mechanical object detection system as a team to further the goal of automating BurnBot, a truck-sized mobile burn chamber that eliminates fuel in wildfire-prone areas
- Personally managed and delegated part design, sourcing, and integration into the main assembly

Bachelor of Science Capstone Project in partnership with UCLA's RoMeLa *August 2023 - May 2024*

- Designed and prototyped an underactuated brachiating robot as a team, using only 1 motor to control the robot's 2 arms relative to one another to traverse a set of monkey bars
- Personally designed the entire mechanical system and sourced the majority of the electronics

Project Lead, Fabrication and Design Essentials at UCLA *August 2020 - May 2023*

- Taught 60+ UCLA engineering students how to 3D model, draft engineering drawings, 3D print, operate common shop machines, select electronic components, and build electromechanical systems
- Fostered the engineering and communication skills of 6 mentors by coordinating their support in weekly lectures and teaching them how to lead discussions
- Successfully proposed and managed a yearly budget of over \$2000 for the program

Rocket Project at UCLA *August 2020 - May 2022*

- Designed and fabricated fiberglass resin nose cones and boat tails for 2 rockets developed for supersonic speeds and apogees up to 30,000 feet
- Implemented a last-minute redesign of the boat tail to integrate new axial quick-disconnects

Education

University of California, Berkeley *August 2025*

Master of Engineering, Mechanical Engineering *3.6 GPA*

- Aerospace Engineering Concentration

University of California, Los Angeles *June 2024*

Bachelor of Science, Mechanical Engineering *3.4 GPA*

- Dean's Honors List

Skills

- CAD design, analysis (FEA & CFD), and drawings using Solidworks, Onshape, and PTC Creo/Pro E
- Manufacturing experience including 3D printing, common shop machines, and CNC manufacturing
- Programming experience using MATLAB, C++, Python, and JavaScript
- Problem solving, technical writing, communication, and adaptability in solo and team environments