Oliver Chang

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EDUCATION

University of California, Berkeley Expected Graduation: May 2028 | GPA: 3.91
B.S. Mechanical Engineering

SKILLS

CAD/CAM: *Onshape, Solidworks, Fusion 360, AutoCAD, ANSYS Workbench, ANSYS Mechanical, ANSYS Spaceclaim*
Programming: *MATLAB, Python, Java, Arduino*
Manufacturing: *3D Printing, BambuStudio, CNC, Fablight, Laser Cutting, Lathe Machines, Milling Machines, Waterjet*

RELEVANT EXPERIENCE

Formula Electric at Berkeley Sept 2024 - Present
Chassis Mechanical Engineer

- Optimized spaceframe stiffness by 56% from initial iterations using structural analysis in ANSYS, refining chassis geometry for rule compliance and improved steering response.
- Validated rule compliance and ensured a Factor of Safety 2+ under crash, cornering, and braking loads.
- Led torsional stiffness testing by designing a custom jig and executing a structured testing plan to validate simulation data

UC Berkeley's Space Technology and Rocketry (STAR) Sept 2024 - Present
Airframe & Propulsion Engineer

- L2 Rocket: Designed rocket layout in OpenRocket, fabricated the airframe and recovery systems, and integrated avionics. Assembled, soldered, and programmed custom flight electronics for altitude, pressure, and temperature data. Successfully launched to 2,944 ft apogee, achieving 30% deviation from predicted altitude.
- L2 Payload: Led the end-to-end development of a custom, Arduino-powered insulated ice cream maker payload. Rapidly prototyped and iterated through three design cycles using 3D printing to achieve a fully functional system.
- Liquid Engine: Applied DFM to manufacture 9 custom injector and combustion chamber components; applied GD&T to ensure strict precision and tolerances for CNC/mill/lathe

Fremont High Robotics FRC Team 3501: Firebots 2020 - 2024
VP of Mechanical Design

- Led a team of 6 to design and iterate a FIRST Robotics Competition robot, completing the initial CAD in 2 weeks and driving redesigns of intake and flywheels post-competition. Finished top 15% of over 3000+ teams in the world
- Coordinated with manufacturing to produce technical drawings and ensure precision fabrication.
- Overhauled workshop by designing 13 workbenches and 2 CNC enclosures

PROJECTS

Wind Turbine: Used FEA & CFD to optimize tower stiffness & airfoil design as part of a class project.
Bike Trailer: Used Onshape to CAD a collapsible bike trailer, reducing to ¼ of its original footprint for storage.
Combat Robot: Designed, wired, and fabricated a fully 3D-printed competitive 1lb robot.

WORK EXPERIENCE

Scouts BSA Summer Camp Staff June - July 2022, 2023, 2024
Kitchen Staff, Aquatics Staff, Handicraft Director

- Designed and taught custom Handicraft curriculum for Cub Scout utilizing leatherworking & woodworking skills
- Instructed over 400+ scouts on first aid, swimming, and lifesaving merit badges

HONORS & AWARDS

Autodesk Design & Make Ambassador
ASME 2025 Cadathon, 1st Place
Eagle Scout, Scouts BSA:

- Drafted, financed, and built originally designed equipment shed for local Little League, reducing costs with local suppliers