

Alex Hadidi

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Education

University of California, Los Angeles (UCLA)

June 2023

Bachelor of Science in Mechanical Engineering

Cumulative GPA: 3.95/4.00

Relevant Coursework: Mechanisms, Statics, Dynamics, Adv. Strength of Materials, Heat Transfer, Fluid Mechanics, Circuits

Skills

CAD/FEA: SolidWorks, Siemens NX, Abaqus FEA, Onshape, Fusion 360

Software: MATLAB, Microsoft Excel, Teamcenter PLM, Python, C++/Arduino, LaTeX

Manufacturing: 3D Printing, CNC/Manual Machining, Injection Molding, GD&T, Composites Manufacturing

Engineering Experience

UCLA Biomechatronics Lab

Los Angeles, CA

Undergraduate Researcher

October 2022-June 2023

- Designed and manufactured molds for casting of custom elastomer end effectors for Hello Robot's Stretch platform.
- Assisted with development and manufacturing of load cell calibration setup for end effector characterization.

Apple Inc.

Cupertino, CA

iPhone Power Product Design Intern

June 2022-September 2022

- Redesigned structure and layout of AC filter under packaging, safety, manufacturing, and assembly constraints.
- Developed physical mock-ups to demonstrate design viability and presented work to senior management.
- Supported development of new mechanism through troubleshooting, part redesign, and prototyping.
- Reviewed vendor designs and provided feedback, ensuring design robustness and compliance with UL specifications.

Northrop Grumman Corporation

Los Angeles, CA

Systems Test Engineering Intern

June 2021-August 2021

- Ran component-level electrostatic discharge testing on 30+ printed ABS parts and published results.
- Performed destructive physical analysis of 20+ printed wiring board coupons for material qualification.
- Reviewed detail and assembly engineering drawings for quality, accuracy, and ease of interpretation.
- Improved integrity of Program Approved Materials and Processes List through validation of material outgassing data.

UCLA Bruin Racing

Los Angeles, CA

Cooling Development Project Engineer - Baja SAE

April 2021-May 2022

- Co-designed and manufactured Bruin Racing Baja's first active cooling system for custom off-road vehicle transmission.
- Utilized FDM, SLA, and SLS 3D printing to manufacture parts; sourced fasteners, electrical components, and sensors.
- Optimized design and analyzed airflow through system components using SolidWorks Flow Simulation software.

Actuation Project Engineer - Baja SAE

October 2019-April 2021

- Redesigned ball screw linear actuator for Baja SAE vehicle transmission, addressing failure mode of previous version.
- Developed encoder-based data acquisition system, increasing reliability and ease of integration with motor controller.
- Explored 2 unique shift fork mounting systems through design and simulation of load cases using SolidWorks FEA.

Leadership Experience

UCLA Bruin Racing

Los Angeles, CA

Internal Vice President

April 2021-May 2022

- Served on administrative board of 100+ member-strong organization to guide club-wide decisions.
- Represented Bruin Racing when collaborating with UCLA administrators and other student organizations.
- Managed relations and events between teams, focusing on technical knowledge transfer and professional development.
- Implemented Bruin Racing-wide newsletter, reaching 600+ prospective and returning members across 3 teams.

Projects

Senior Capstone - Ankle Positioning Device: With team of three others, developed prototype medical device for repeatable and precise ankle positioning during surgery. Designed and manufactured modules that communicate inertial measurement unit (IMU) sensor data over bluetooth, and demonstrated device effectiveness through testing with Vicon motion capture system.

Quadrotor Drone: With team of three others, designed, manufactured, and assembled quadrotor drone. Laser cut and 3D printed all components (excluding fasteners and electronics), and gained exposure to PX4 Autopilot flight-control software.