Alex Hadidi

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Education

University of California, Los Angeles (UCLA) June 2023
Bachelor of Science in Mechanical Engineering **Cumulative GPA: 3.94/4.00**
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, DFM, DFA, Composites Manufacturing

Engineering Experience

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 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.

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

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

Mini Electrocardiogram (ECG): Assembled Arduino-based ECG circuit on breadboard. Gained exposure to active and passive component selection, signal amplification, and analog signal processing.