

JONATHAN HUANG

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Summary

Dedicated mechanical engineering student passionate about innovative problem solving. Over 7 years of engineering and leadership experience including projects, research, and internships. Looking for unique and critical challenges to tackle.

Education

University of California, Los Angeles (UCLA)

June 2023

Bachelor of Science in Mechanical Engineering

GPA: 3.55

- **Relevant coursework:** Statics, Dynamics, Adv. Strength of Materials, Fluid Mechanics, Heat Transfer, Thermodynamics

Technical Skills

Computer: SolidWorks (CSWA), Siemens NX, 3DEXPERIENCE Catia, Fusion 360, Ansys, Altair Inspire, MATLAB, C++, LaTeX

Manufacturing: Manual mill, Manual lathe, Waterjet, Laser cutter, Drill press, Band saw, 3D printer, GD&T

Engineering Experience

SpaceX

June 2022-September 2022

Raptor Components Manufacturing Engineering Intern

- **Transferred ownership** of fuel line assembly into Components Shop and redesigned all processes to shop standards
- Implemented process improvements to increase build reliability and **decrease assembly time by over 30%**
- **Held thorough safety reviews** and designed new tooling to allow Components Shop to own fuel duct proof test

Rivian

June 2021-September 2021

Power Electronics Manufacturing Engineering Intern

- Designed, procured, and built electrical and coolant pigtail connections for **DC fast charger End-Of-Line test stations**
- Found alternative components and new suppliers to **reduce pigtail cost by \$90k/quarter** from initial estimates
- Developed custom assembly line carts, build fixtures, and alignment jigs to simplify processes and **achieve takt times**

simplehuman

June 2020-June 2021

R&D and Mechanical Engineering Intern

- Created mechanism to increase airflow into trash can and **reduce trash bag vacuum extraction force by 50%**
- Designed and assembled test jigs to **fatigue test** upcoming products for a lifecycle rating of 15,000 cycles
- Proposed and implemented design changes to **reduce backlash** in new rotating sensor mirror products by 98.4%

Bruin Racing Formula SAE

September 2019-Present

Technical Director

- **Defined data driven top-level vehicle goals** to drive overall design direction for team of over 70 student engineers
- Created **custom NX motion study simulation environment** to rapidly and accurately tune suspension motion ratios
- Utilized topology optimization in Altair Inspire to **reduce bellcrank weight by 64%** while reaching stiffness targets

UCLA Mechatronics and Controls Lab

February 2020-March 2022

Undergraduate Researcher

- Designed and researched **sensing components** for Intraocular Robotic Interventional and Surgical System (IRISS)
- Developed and manufactured **mechanism to mount and rotate Phacoemulsification tool** relative to robot
- Designed surgical tool exchanger prototype and **worked with vendors to decrease cost by 62%**

Battlebots - Team Retrograde

June 2021-September 2021

Flamethrower Design Engineer

- Developed flamethrower weapon for Retrograde Battlebot competing on the **Discovery Channel Battlebots TV show**
- Designed **custom electronic circuit** to safely and remotely controller flamethrower ignition
- Implemented modular design to isolate flammable components and **allow for ease of serviceability**

Leadership Experience

UCLA Engineering 96G: Go Karts

September 2021-Present

Instructor

- Work with team of 3 student instructors to **teach official UCLA introductory engineering course**
- Developed 10 week curriculum to teach students how to apply engineering principles to CAD and build a Go Kart

Engineering Society at UCLA

November 2019-April 2021

Engineers Week Chair

- Collaborated closely with committee of 5 to **secure over \$6,000 in funding** for events like Kids Day and Talent Show
- Lead transition from in-person to virtual E-week, resulting in several successful online events with over 400 attendees