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Aiden Leonard | Resume

- Status: Studying Motorsport Engineering at Oxford Brookes University (M.Sc.)
- Skills: Nx, Catia V5, SolidWorks, FEA, Python, C++, 3D Printing, Prototyping
- Interests: Lithium-Ion Batteries, Electric Vehicles, Renewable Energy, Teaching
- Activities: Basketball, Travel, Gaming, Podcasts, Music

Summary

Dedicated Mechanical Engineer with a passion for renewable energy, energy storage, and mechanical design. Motivated to make an impact by solving difficult problems. Organized, analytical, a good listener, and a clear communicator.

Experience

3/'21 - 5/'21 **Mechanical Engineer, Vehicle Interiors** Tesla, Inc

- Prototyped, tested, and implemented various design improvements to interiors components for the Model X
- Obtained fundamental knowledge of the automotive industry lifecycle as well as injection molding design of interior components
- Identified new issues and tracked design improvements by examining components on the vehicle assembly line

9/'19 - 3/'21 **Mechanical Engineer** Lam Research Corp.

- Conceptualized, designed, tested, and implemented service assemblies to remove and install large semiconductor manufacturing equipment
- Modified design of thermal chamber resulting in a 40% decrease in startup time, and established a cleaner and faster procedure for installing thermal heaters
- Resolved issue with vacuum line leak by duplicating the failure, exploring alternate materials using a tensile machine and industrial oven, and recommending a material with a higher young's modulus, higher temperature resistance, and acceptable RF compatibility
- Led design reviews, FMEA reviews, and brainstorming meetings
- Created drawings using GD&T and weld symbols for high precision components
- Created, revised, and updated complex BOM's using iPLM

Education

2021- now **Master's Degree, Motorsport Engineering** Oxford Brookes University

- Research: High Voltage Energy Storage Group
- Developing a constant-pressure fixture to measure the performance of Lithium-Ion pouch cells
- Helped instruct multiple undergraduate engineering classes
- Designed an undergraduate project where students program an Arduino to measure the pressure of a water pump

2020 - 2021 **Gradaute Level Courses, Engineering** University of California, Riverside

- Research Project: Battery Cooling using 3D Printed Metal (link)
- Compared two 3D printed liquid cooling systems, one metal-infused plastic system and one plastic system
- Designed the system with a spiral channel for flowing water to cool a 40W battery
- Determined that the 90% copper system had 3.3 times the conductivity of the plastic system and kept the battery under 60˚C with 40W of power

2015 - 2019 **Bachelor's Degree, Mechanical Engineering** University of California, Irvine

- Cum Laude honors and member of Tau Beta Pi honor's society
- Designed an autonomous compressed air-powered vehicle with GPS guidance using an Arduino microcontroller
- Designed a drink-balancing RC car that keeps drinks on top of a plate despite acceleration, braking, or turning