AIDAN LEITCH

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EDUCATION

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES, CA
Masters of Science, Mechanical Engineering, Viterbi School of Engineering   *May 2024*
3.90 GPA
Bachelors of Science, Mechanical Engineering, Viterbi School of Engineering   *May 2023*
3.72 GPA

SKILLS

- Proficient at CAD and FEA in Autodesk Fusion 360, Siemens NX, and SolidWorks with PDM
- Fluent in programming with MATLAB, LabVIEW, Structured Text, and Python
- Experienced in working with electrical components such as sensors, controllers, DAQs, and PLCs
- Trained in Product Lifecycle Management using Salesforce Propel and Oracle PLM

EXPERIENCE

BLOOM ENERGY, SUNNYVALE, CA
Electrolyzer Hot Box Engineering Intern   *May – Aug. 2023*
- Sized and tested orifice plates to increase hydrogen output pressure of a solid-oxide electrolyzer
- Performed system design of a test stand for Calibrated Accelerated Life Testing (CALT) of heater coils
- Designed a high-voltage insulated busbar as a proof-of-concept for connecting tubular heaters

BLOOM ENERGY, SUNNYVALE, CA
Mechanical Systems Engineering Intern   *May – Aug. 2022*
- Designed a test stand for the qualification of mass flow controllers (MFCs) for use in future products
- Implemented a PLC to interface with valves, pressure transducers, thermocouples, and flow meters
- Wrote a LabVIEW virtual instrument for operation of the test stand and data collection

ZUME INC, CAMARILLO, CA
Manufacturing Engineering Intern   *May – Aug. 2021*
- Led the product and tooling design for a molded fiber test sample that characterized material properties
- Performed finite-element strength analysis on product models to help inform the design process
- Designed a waste sweeper for a die trimmer that was implemented on five manufacturing lines

PROJECTS

WAVE GENERATOR CONTROLS – Senior Design Project   *Aug. – Dec. 2022*
- Created a control system and electrical infrastructure for a water wave generator
- Designed a LabVIEW DAQ system to measure and collect wave height, wavelength, and frequency data
- Implemented a VFD to drive a 1 kW 3-phase motor and integrated it with LabVIEW using Modbus
- Tested the wave generator in a 30-foot long water channel

SPACEPAINTER – Project Manager under USC Makers   *Aug. – Dec. 2020*
- Created a CNC light painting robot that can "draw" in long exposure photos using a robotic arm
- Worked with a team of student mechanical engineers to build a 2-axis spherical motion platform
- Directed the development of kinematic control software to draw user-defined images

PAPER COMPRESSION MOLDING – Independent   *May – Dec. 2019*
- Devised a method for recycling paper waste into detailed forms using 3D printed tooling
- Performed testing to document the environmental degradability and compostability of recycled objects