Kaleb Lam

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Professional Experience

Atlas Copco Mafi Trench | Mechanical Designer — August 2024 – Present

- Designed human centered P&ID layouts and skid base systems for turboexpanders using SolidWorks (weldment, routing, & solid modeling), reducing fabrication guidance and completing designs ~2 months early
- Drafted turboexpander machinery components, rotating and electro-mechanical actuator assemblies using GD&T and SolidWorks, ensuring fit, function, and serviceability
- Structured comprehensive BOMs, containing 10,000+ individual components, ensuring proper material selection and part procurement under strict sourcing deadlines
- Facilitated design reviews, presenting designs that aligned with customer specifications, effectively balancing customer needs with company objectives

Kreysler and Associates | Process Engineering Intern — June 2023 – Sep. 2023

- Developed clear and concise standard operating procedures for lamination, finishing, and truss adjustment of fiberglass composite panels, enabling technicians to follow procedures with little oversight
- Reduced rework by 30% by cycle tracking manufacturing operations to identify bottle necks and designing custom tooling
- Reduced cure time by 9%, while maintain working time, by testing with viscometer and barcol hardness instrument the gelation and cure time of epoxy resins under varying hardeners and heat

Flume Water, San Luis Obispo | Technical Support Intern — July 2022 – July 2023

- Served as first point of contact for customers' technical issues with IoT water monitor, consistently earning 93% customer satisfaction
- Troubleshot connectivity, measurement, hardware, and mechanical issues through data analysis, inspection, real time tests, and log interpretation; reduced the rate of recurring customer visits to 20 of 1500+ per month
- Evaluated common areas of failure within mechanical and hardware systems using Excel VBA automation and communicated findings, contributing to Flume 2.0 monitoring system improvements

Projects

EMPOWER | Weightlifting Prosthetic — September 2024 – June 2025

- Led the team in engineering, design, and fabrication of a transradial weightlifting prosthetic, successfully developing a basalt composite socket
- Engineered custom vacuum tooling for socket lamination, allowing for optimization of custom socket fabrication procedure
- Improved designs by analyzing high stress areas with FEA and 3D printing prototypes for functional tests and composite molds

SLO Propulsion Technology | Liquid Bi-Propellant Rocket — January 2024 – May 2024

- Engineered vertical test stand, resistant to hard start loading and compatibility with electro-mechanical system, resulting in the successful launch of Cal Poly's first liquid bi-propellant rocket to 15,300'
- Calculated thread pullout, tie down loading, and strain gauge mount safety, verified through FEA, allowing for multiple successful static and hydrostatic test fires
- Fabricated successful line cutter and test stand systems using a lathe, MIG welder, water jet, and 3D printer

Composite Testing, Cal Poly | Individual Project — March 2022 – June 2022

- Verified MATLAB model for loading of variable laminate configurations, using film strain gauge measurements and a universal test machine; compared the stiffness matrix, compliance matrix, and elongation of MATLAB simulation to self-made test samples

Education

- **Cal Poly - SLO**, College of Engineering — **Location**: San Luis Obispo, CA
- **Degree:** B.S. Mechanical Engineering — **Graduated**: June 2024
- **GPA:** 3.73 / 4.00