JACKSON ZILLES

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Education

University of California, Berkeley | **B.S. Mechanical Engineering** **Expected Graduation - May 2025**

- **Relevant Coursework** **GPA: 3.6/4.0**

  3-D Modeling | FEA | Solid Mechanics | Product Development | Thermodynamics | Manufacturing & Design Communication | Material Behaviors | Fluid Mechanics | Electronics | Human Factors Design | Prototyping

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Skills and Certifications

- **Technical Skills:** Parametric Modeling / DFM / Design for Assembly/ GD&T / PLM / Rapid Prototyping
- **Fabrication:** CNC Milling / FDM, SLA 3D Printing / Laser & Waterjet Cutting / Lathe / Engineering Drawings
- **Software Skills:** SolidWorks / CATIA / NX / Fusion / MATLAB / Adobe Creative Suite / Microsoft Office Suite
- **Certificates:** Berkeley SCET Entrepreneurship Certificate / Berkeley Certificate in Design Innovation

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Experience

Mechanical Engineering Co-op – Tesla - Seating Engineering **Jan 2024 – Aug 2024**

- Redesigned internal tool, designed housing using CATIA and PCB in KiCad, optimized for cost and ease of assembly, collaborated with suppliers, resulting in an 82% cost down and a 90% assembly time decrease
- Designed, prototyped, and presented to executives an industry-first mechanism for seat adjustability to increase performance capabilities, including pneumatic-controlled air cells and resistive switch control
- Discovered, modified, and implemented a supplier part change creating an annual cost savings of $19k
- Designed, validated, and released production parts for Model 3 and Model S performance seating systems

R&D Intern – Stryker **May 2023 - Sept 2023**

- Designed and prototyped a new multi-piece surgical device for use in multiple joint spaces, with all pieces designed for injection molding and rapid hand assembly; included a custom foam insert for rapid unloading
- Iterated CAD models in Solidworks PDM, undergoing regular design reviews and iterations, resulting in a completed CAD assembly and functional 3D printed prototypes used for testing in simulation bone
- Tested new and in-development products with various instruments (Keyence, Instron, force gauges)

Product Design – BEAR Adventure Vehicles **Jul 2022 - Sept 2022**

- Created modular interior furniture design pieces for pickup truck bed campers in Fusion 360, standardized layouts of base models to create a starting point for client customizations resulting in a streamlined process
- Created full-size augmented reality models to allow customers to visualize a camper before a build start
- Collaborated with team members to improve design choices for cost and space limitations as well as standardize parts for use in various models, decreasing overall labor hours for manufacturing by 20%

Design and Manufacturing Lead – Adjustable Stool Backrest Project **Sept 2022 - Dec 2022**

- Used Solidworks to design a backrest for a bar stool with three adjustable points, including a spring-loaded telescoping clamp; utilized GD&T to achieve accurate machining and fits, leading to a functional prototype
- Machined 14 individual parts using a mill, lathe, water jet, 3D printer, band saw, and metal bending

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Leadership Experience

Founder – Surge Electric Motorcycles at Berkeley **Aug 2023 - Current**

- Founded and recruited talent for a non-profit engineering competition team focused on designing, building, testing, and racing an electric motorcycle as part of the Formula Lightning student challenge
- Currently retrofitting a Honda CBR600 with custom components for a race-quality electric conversion

External Vice President – Engineering Solutions at Berkeley **Dec 2023 – Aug 2024**

- Spearheaded client acquisition efforts to source projects each semester, resulting in a consistent revenue stream of $30,000 per semester while improving existing dated resources for sourcing for future members
- Procured industry talent to present and educate members as well as hosted private recruitment events