

PIPER JACOBS

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SKILLS

Applications: Siemens NX, SolidWorks, CATIA, Fusion 360, AutoCAD, Confluence, Jira, Microsoft Office Suite, Google Suite

Fabrication: TIG Welder, MIG Welder, Plasma Cutter, Water Jet, Mill, Lathe, Power Tools, Hand Tools, Composite Layup, 3D Printer

Other: Electronics Soldering, Lockout-Tagout, Fall Protection and Rescue, Boom Lift, Forklift, Scissor Lift

PROFESSIONAL EXPERIENCE

Boston Engineering | Waltham, MA

Jun 2022 - Present

Mechanical Engineer

- Determined critical dimensions of biomedical device and created multipurpose CMM fixture to identify key sources of variance using data collected.
- Provided clients actionable steps to improve design for manufacturing, assembly, and automation for their product.
- Advised sales team and project managers on scope, timeline, and budget of incoming biomedical and commercial projects.
- Prepared and delivered update presentations and summary reports for clients, as required by company business contracts.
- Generated and maintained detailed BOM, SOP, assembly instructions, test documentation, and order tracking system.
- Formalized co-op program by standardizing the schedule, development opportunities, and mentorship program.
- Updated CAD models by adding hardware, renaming parts, breaking into subassemblies, and organizing PLM records.

Space Exploration Technologies | Hawthorne, CA

Jan 2021 - Jun 2021

Starlink User Terminal: Structures Engineering Intern

- Designed parametric mounting plate and table assembly, coordinated the integration to the assembly line, and managed the installation of nine vibratory feeders.
- Investigated the feasibility of bringing tooling fabrication in-house by developing prototypes using COTS and custom parts.
- Created a preventative maintenance schedule and engineering drawings with GD&T for a rework tool that recuperated \$1000 per defective product.
- Characterized the response of a rubber part to heat and pressure cycles using an Instron and a thermostatic chamber.

Sonos | Boston, MA

Jan 2020 - Jun 2020

Mechanical Engineering Co-op

- Collaborated with an international supplier to iterate on a wireless charging coil that contributed to achieving an IPX7 rating and an increase in manufacturability for the Sonos Roam.
- Created multiple acoustic, appearance, and industrial design prototypes for five next-generation audio products using bottom-up and synchronous modeling.
- Designed test apparatus to visualize and isolate air leak in acoustic volume enclosure for an upcoming product component.
- Informed critical dimensions of an upcoming product by collecting, analyzing, and presenting market research.

Tesla | Fremont, CA

Jan 2019 - Aug 2019

Production Control: Equipment Engineering and Maintenance Intern

- Designed a modular system for material handling safety gate repairs that cut costs by 92%, decreased time by 77%, and increased the safety of 10 gates.
- Served as the mechanical lead for a \$63,000 automatic pallet stacker equipment installation that reduced associate headcount by four, eliminated a process responsible for multiple safety incidents, and produced an ROI in three months.
- Interfaced with multiple vendors to manufacture and deliver custom small parts racks for a factory-wide update.
- Created custom shadow board inserts for component dollies using top-down and parametric modeling.

PROJECT EXPERIENCE

Northeastern University Motorsports Baja SAE | Boston, MA

Sep 2017 - Jun 2022

Co-Captain (Jul 2021 - Jun 2022), Chassis Lead (Jul 2019 - Jun 2022), Welder (Sep 2018 - Jun 2022)

- Captained a team of 20+ students that design, build, and race a single-seat, off-road vehicle in national competitions.
- Led the chassis subteam from the development of requirements and goals to the completion of welded assembly.
- Designed and analyzed the chassis using a parametric model and FEA to satisfy competition rules, vehicle requirements, and inputs from other subteams.
- Managed all team logistics from day-to-day operations to long-term projects.
- Championed safety culture by improving fabrication spaces, providing safety training, and modeling good practices.

EDUCATION

Northeastern University | Boston, MA

Sep 2017 - May 2022

Bachelor of Science in Mechanical Engineering

GPA: 3.50

Master of Science in Mechanical Engineering, Concentration in Mechanics and Design

GPA: 3.00