

Peter Martin

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Palo Alto, CA

Objective: Seeking a full time Mechanical Engineering position

Education: Rochester Institute of Technology

Aug 2019 – Present

Bachelors of Science in Mechanical Engineering

Coursework: Strength of Materials I and II, Thermodynamics, Multivariable Calculus, Differential Equations, Engineering Measurements, Design Tools and Mechanics, Circuits, Statics, Lin Alg, Advanced CAD (Creo)

Work Experience:

Procept BioRobotics, R&D Engineering Intern

Jun 2023 – Aug 2023

- Worked on 2nd generation handpiece validation efforts
- Designed, tested and quoted medical grade disposable packaging with assembler and end user considerations, to be in production
- Designed tested and quoted packaging fixtures for cleanroom use, wrote associated user guides and assembly documentation

BorgWarner, Mechanical Engineering Intern

Aug 2022 – Dec 2022

- Worked in Phaser development team
- Designed test fixture to evaluate material interaction in press fit scenario and developed a pull fixture for strength testing
- Performed weld section analysis, hardness testing and penetration measurements
- Performed analysis of customer test units, teardown, metallurgy evaluation and presented conclusions to senior engineers and manager. Failed results shared with customers to inform their testing, changes made to engineering specifications. Further steps made at higher level

Light Green Machines, Mechanical Engineering Intern

Oct 2022 – Dec 2022

- Tasked with reworking a Tesla Drive Unit from Model S, new logic board options researched and installed
- Designed and fabricated mounts for Tesla Drive Unit. Designed for steel plate construction, and potential maintenance in mind
- Modified/ elongated CV shafts to clear control arms and ensure minimal driven angle
- Began process of high voltage wiring harness for BMW hybrid batteries, and open source battery management system

Terabase Energy, Engineering Intern

May 2022 – Aug 2022

- Research and development of industrial solar module scanning solution
- Developed CAD models in SolidWorks to 3d print, laser cut and bend sheet metal
- Developed and documented assembly process for small scale production
- Prototyped manufacturability studies using 3D printing

Project Team Experience:

CubeSat, Engineering Team

August 2022 – Present

- Worked on mechanical team to test and develop radiation shielding, RIT's first student project planned to go to space
- Built custom lithium battery for final iteration of payload
- Machined components for HAB (high altitude balloon) testing
- Brainstormed elements for electrical power transfer

Selected Personal Project:

See www.peterlmartin.com for complete list

Mid-Drive Electric Bike

May 2018 – Jan 2019

- Designed and fabricated a system to mount electric bike hub motor to the center of a downhill bike frame, power (7Kw) transmitted through conventional gears and shifter
- Machined hub motor exterior to be more compact, as well as left hand freewheel mechanism to maximize pedaling efficiency
- Used a custom programmed Kelly Controller with a custom built 72v lithium ion battery pack

Portfolio:

www.peterlmartin.com

Skills:

- CAD modeling
Solid Works, Fusion 360, Creo, OnShape - design for manufacturing (sheet metal, 3D print, injection mold, welded structure)

- Machining

Manual mill, manual lathe, drill press etc.

- Welding

MIG, TIG, Stick, Brazing

- 3d printing

Assembly, troubleshooting, maintenance, design for tolerance

- Rapid prototyping

From design and test to manufacturing

- HW/SW interfaces

Communicating with devices, running commands, serial port

Extracurriculars:

- *Build Lead* on FRC Team #8, high school robotics team

- *Maker Faire presenter* in

Bay Area Maker Faire (2017-2019)

Languages:

- English (native)
- Spanish (proficient-fluent)

Interests:

- Refurbishing classic cars
- Online gaming
- Camping
- Skiing