Zachary Felty

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Education

Arizona State University — Tempe, AZ

M.S.E in Electrical Engineering, *In-Progress* — *August 2024 – May 2026*

B.S.E. in Robotics Engineering, GPA: 3.5 — *August 2020 – May 2024*

Relevant Coursework

- Embedded Systems Design, Robotic systems, Analog and Digital circuits, Quantum mechanics, Linear Algebra, Differential Equations, Calc III, Mechanics of Materials, Statics and Dynamics
- MATLAB fundamentals certification, ASU Spark Leadership Certification

Proficiencies

- Altium Designer, Cadence/OrCAD MATLAB, Python, Simulink, C, C++, MPLAB X, PSoC Creator, KiCad, Cura, CorelDraw, Google Applications (Docs, Slides, Drive), Microsoft Applications (Word, Powerpoint, Excel)

Work Experience

ASU Interplanetary Laboratory - Project Manager — Tempe, AZ

Development of CubeSats and space related projects — *January 2024 – Present*

- Management of lab equipment and student projects
- Integration and testing for SPARCS CubeSat
- Designing and integrating DORA CubeSat ground station

SunFlex Solar - Solar Laboratory Engineer — Tempe, AZ

Research and development of IBC Solar Modules — *March 2023 – Present*

- Laboratory research in positive-pressure cleanroom wearing PPE
- Programming of microscope for silver contact imaging and PL/EL high exposure photos
- Fabrication of solar modules with laser welder, cold roller, laser cutter, and laminator

Avo Mobility - Project Engineer Intern — Berlin, Germany

Avocargo Electric Bike Sharing — *June 2022 – September 2022*

- Fabrication of bike parts using laser cutters, 3D printers, and shared workshop
- Benchmarking and CAD modeling of prototype bike Parts
- Field testing prototypes to assess effectiveness and durability

Relevant projects

SPARCS - Star Planet Activity Research CubeSat

ASU x JPL - upcoming CubeSat mission — *Jan 2024 – Present*

- Integration of payload to spacecraft in cleanroom wearing PPE
- TVAC testing to simulate extreme operating environments
- Assembly and maintenance of spacecraft test equipment

Astronaut Life Support Health Monitor System

Paragon - Professional Design Project — *August 2023 – May 2024*

- PCB design and mechanical housing design to withstand extreme conditions
- Electrode array and analog circuit filtering for electrodermal activity
- Programming of MSP430 MCU and collecting of health data via FRAM