Marshall Saltz

lsaltz.github.io | saltztech.com

Recent Electrical and Computer Engineering graduate with hands-on experience in mechatronics, robotics, and embedded systems. Seeking meaningful work in robotics, embedded systems, or assistive technologies.

EDUCATION

Honors Bachelor of Electrical and Computer Engineering   Sep. 2021 - Jun. 2025
with Minor in Computer Science   GPA: 3.25
Oregon State University, Corvallis, OR

TECHNICAL EXPERIENCE

Founder | *Saltz Technology, LLC, Fort Collins, CO* | Sep. 2025 - Present
- Launched a growing company providing custom solutions for people with disabilities.
- Constructing a portfolio of life-altering projects including a desktop robotic arm and a Kinova JACO extension.

Mechatronics Engineer | *Owen Kent, Fort Collins, CO* | Jul. 2025 - Present
- Designed and built a wheelchair mounted mechatronic wireless dog treat dispenser using an ESP32 as a web server, FreeRTOS, and a Bambu 3D printer.
- Designed wheelchair mounting solutions for 2 different devices using CAD and 3D printing, improving quality of life.
- Assembled and configured drones using Ardupilot for operation via mouth for those unable to use their fingers.

Student Researcher | *Robotics Lab Arm Farm, Oregon State University, Corvallis* | Jan. 2022 - Jun. 2025
- Ran an evolutionary algorithm to evaluate >200,000 simulated two-finger gripper configurations, optimizing workspace reachability.
- Published honors thesis with results validated with Pybullet and Python.
- Authored effective technical documentation in an R&D environment for reproducibility.

Artificial Intelligence Intern | *AgAID, Corvallis, OR* | Jun. 2023 - Aug. 2023
- Developed Python pipeline to fuse RGB-D data into accurate 3D tree meshes, enabling realistic pruning simulations for robotic arms.
- Delivered a final presentation of research outcomes to a panel of industry leaders and academic professionals, receiving positive feedback.
- Advanced AI-driven agricultural solutions for testing a robotic system in simulation by contributing to a collaborative codebase, improving simulation performance.

Student Technician | *UIT Service Desk, Oregon State University, Corvallis, OR* | Nov. 2021 - Jun. 2025
- Diagnosed and resolved hardware/software issues on MacOS/Windows platforms with above a 90% first-contact resolution rate.
- Provided excellent customer service by utilizing strong phone etiquette and conflict resolution strategies.

PROJECTS

- **Custom Drone:** Designed PCB in KiCAD, machined frame, and implemented an auto-landing controller.
- **Robotic Drawing Arm:** Built a Python GUI and utilized computer vision to replicate images, designed chassis in Fusion360 and implemented custom PCB.

SKILLS

- **Electrical:** KiCAD, PCB Design, Flexible and Printed Electronics, VLSI, FPGA, LTSpice, Soldering, Electrical Debugging, AVR Assembly
- **Mechanical:** Fusion360, Power tools, Prototype assembly, Hand tools, 3D printing, AutoCAD
- **Software:** PyBullet, Python, C/C++, MATLAB, Microcontrollers, Linux, Computer Vision, FreeRTOS, ROS2
- **Soft:** Technical Writing, Problem Solving, Public Speaking, Customer Service, Communication