Sam Weston
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EDUCATION

Montana State University, Norm Asbjornson College of Engineering, *Bozeman, MT* Diploma May 2022
- Bachelor of Science in Mechanical Engineering
- Minor in Mechatronics
- GPA: 3.57/4.0

University of Washington, College of Engineering, *Seattle, WA* September 2023 - Present
- Working towards Master of Science in Mechanical Engineering
- Concentration in Controls, Mechatronics and Robotics

EXPERIENCE

Research Assistant, Vashisth Research Lab and BARC**,** *Seattle, WA* October 2023 – Present
- Design and 3D print a 4th axis for a robotic gantry system

Volunteer Mentor, Ballard High School FIRST Robotics**,** *Seattle, WA* October 2022 – Present
- Teach students basic mechanical engineering and manufacturing concepts and techniques
- Assist students with mechanical design of robotic mechanisms

Mechanical Engineering Intern, Glowforge, Inc**,** *Seattle, WA* December 2022 – March 2023
- Designed, 3D printed and validated mechanical testing fixtures
- Performed product reliability testing
- Wrote python code to organize reliability testing data
- Ran calibration processes for electro-mechanical devices

Undergraduate Researcher, Bio-Inspired Dynamics Lab, *Bozeman, MT* September 2021 – May 2022
- Developed mathematical models of flying insects
- Wrote MATLAB code to perform parameter studies of flying insect models
- Studied the effects of wing flexibility on the power requirements for flight
- Presented at the Montana State 2021 Winter Research Celebration

Senior Design Project, Montana State University**,** *Bozeman, MT* August 2021 – May 2022
- A four-student group project for the optics company AdvR
- Designed, wrote code for, and assembled an Arduino based UV LED controller
- Retrofitted a custom optical fiber alignment station with new motors and controller

SKILLS

Mechanical Design
- Solidworks: Coursework and projects at MSU, Glowforge internship
- Autodesk Inventor: High school experience, in class and through robotics club
- Mechanism Design: Coursework and projects at MSU, as well as high school robotics club
- FEA Software: Coursework and projects at MSU using ANSYS APDL

Coding
- MATLAB: Coursework and research at MSU
- Python: Robotics programming class at MSU, Glowforge internship
- Arduino IDE: Mechatronics class and capstone project at MSU

Fabrication
- CNC Machining: High school experience using Autodesk Inventor HSM CAM software with benchtop CNC mills, in class and through robotics club
- Manual Machining: Machining class at MSU
- 3d Printing: Projects at MSU and personal projects

PUBLICATIONS

- Cote B, Weston S, Jankauski M. Modeling and Analysis of a Simple Flexible Wing—Thorax System in Flapping-Wing Insects. *Biomimetics*. 2022; 7(4):207. https://doi.org/10.3390/biomimetics7040207

Portfolio Website: