Sam Weston

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Portfolio: sam-weston.com | LinkedIn: linkedin.com/in/sam-k-weston

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

EXPERIENCE

Bio-Inspired Dynamics Lab, Undergraduate Researcher, *Bozeman, MT* September 2021 – May 2022

- Assisted with development of mathematical models of flying insects
- Worked on MATLAB code to perform parameter studies of flying insect models
- Focused primarily on the effects of wing flexibility on the power requirements for flight
- Presenter 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 and wrote code for an Arduino based UV LED controller
- Selected new motors and controller to retrofit a custom optical fiber alignment station

RoboSub, Member of Montana State RoboSub Team, *Bozeman, MT* October 2017 – August 2018

- Performed mechanical maintenance and repairs on the AUV (autonomous underwater vehicle) leading up to and during competition

First Robotics, Member of Ballard High School Robotics Team, *Seattle, WA* September 2015 – May 2017

- Team "Viking Robotics"; FRC team 2928
- Mechanical design team lead for 2016-17 season
- Designed robot drive base and multiple game element manipulation mechanisms
- Volunteer and mentor for elementary and middle school robotics

SKILLS

Mechanical Design

- Solidworks: Coursework and projects at MSU, including producing drawings and using GD&T
- Autodesk Inventor: High school experience, in class and through robotics club
- Statics and Dynamics: Coursework, projects, and undergraduate research at MSU
- 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
- 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
- Welding: Welding class at MSU
- 3d Printing: Projects at MSU and personal/extracurricular projects