Sawyer Greaves

greaves.sawyer@gmail.com | (208) 994-1613

EDUCATION

B.S. Mechanical Engineering Dec. 2025
University of Utah **3.957 GPA**

TECHNICAL SKILLS

Software

- AutoCAD
- SolidWorks (CSWA)
- Autodesk CAM
- Simulink.

Coding Languages

- Python
- MATLAB
- Arduino.
- OOP

Fabrication

- CNC
- 3D printer
- Manual mill and lathe.

EXPERIENCE

Research Engineering Intern Aug. 2023 - Present
Sublime Laser, Salt Lake City, UT

- Developing femto-second laser machining process for guidewires, catheters, and stents.
- Optimizing post-processing, including microscopic inspection, acid-etching, and ultrasonic cleaning.
- Start-up environment, joined six months after opening business.

Research Assistant Sep. 2022 - Jun 2023
University of Utah Powder Metallurgy Lab, Salt Lake City, UT

- Operated and maintained developmental binder-jet titanium 3D printer.

PROJECTS

Robot Arm with External Actuators Jan. 2023 - Present
Personal Project

- Developing a 5 degree-of-freedom robot arm with the motors mounted externally for greater lifting capabilities.
- Every part custom modeled in SolidWorks.

G-Code Simulator Dec. 2023 - Jan 2024
Sublime Laser, Salt Lake City, UT

- Proposed and created custom software (Python) to simulate generated G-Code.
- Built simple user interface to upload file and calculate manufacturing time.

Robot Arm Simulator Oct. 2023 – Dec 2023
Personal Project

- Created 3D viewing environment (Python) with calculated and animated movement.
- Previously created inverse kinematics engine calculated arm orientations.
- Created sliders to manually define target position.
- Created coordinate input box with arm animating movement to new position.

Inverse Kinematics Engine May 2023 – Oct 2023
Personal Project

- Developed custom inverse kinematic algorithms (Python) for indeterminate problems.
- Created to adapt to any number of joints in 3D space.