

# Conrad Kelsay

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## EDUCATION

### Oregon State University

Sep. 2024 – June 2028

*Bachelor of Science in Mechanical Engineering*

Corvallis, OR

- **Cumulative GPA:** 3.85/4.00
- **Organizations:** Robotics Club (Mars Rover Team), Biomedical Engineering Society, Club Lacrosse
- **Honors:** Dean's List: Fall 2024–Spring 2026 (5 terms)
- **Coursework:** Thermodynamics, Dynamics, Computational Methods, Circuits, Linear Algebra, Materials Science

## SKILLS

**Languages:** Spanish

**Programming:** Python, PLC Programming

**CAD:** Siemens NX, Autodesk Inventor, Autodesk Fusion 360

**Industrial Automation:** Allen-Bradley Studio 5000, FactoryTalk View

**Fabrication:** 3D Printing, Laser Cutting, Drilling, Grinding

**Wet Lab Techniques:** Cell Culture, Sterile Techniques, Cell Staining, Quantitative Analysis, Light Microscopy

## PROJECTS

### Robotic Arm

January 2026 – Present

- Designing and building a **6-axis** robotic arm using NEMA 17 stepper motors, A4988 drivers, and Arduino Uno controllers
- Programming Arduino microcontrollers to coordinate multi-axis motor control and fabricating custom components using **Fusion 360** and a **Bambu P1S** FDM 3D printer

### Mars Rover Robotics Club Science Mechanism

April 2026 – Present

- Designed and iterated CAD assemblies in **Fusion 360** for a spectrometer housing used in rover-based soil sampling
- Engineered a clamping and flask retention mechanism for containing soil-water slurry samples during pump-driven testing and material transfer operations
- Collaborated on subsystem integration, tolerance analysis, and component mounting strategies to improve structural rigidity, manufacturability, and serviceability under off-road operating conditions

### Back Bay Water Quality Analysis

May 2025 – Jun. 2025

- Analyzed a **2,400-row** longitudinal dataset using **pandas**, **NumPy**, and **Matplotlib** to quantify long-term trends in water temperature, air temperature, and water depth

## EXPERIENCE

### Talos Engineering

Jun. 2026 – Present

*Automation Engineering Intern*

Portland, OR

- Developing and modifying industrial PLC ladder logic using **Allen-Bradley Studio 5000** for automation and manufacturing applications
- Supporting commissioning, testing, and troubleshooting of PLC-controlled industrial equipment
- Collaborating with automation engineers to integrate sensors, actuators, and electrical control systems into customer solutions

### OHSU Knight Cancer Research Institute

Jul. 2024 – Sep. 2024, Aug. 2025 – Sep. 2025

*Intern*

Portland, OR

- Maintained **~15 metastatic** cancer cell lines through routine cell culture, sample preparation, and biological assays
- Sustained a CRISPR-knockout prostate cancer cell line exhibiting **40× increase in proliferation** relative to wild-type; documented results using **Incucyte** live-cell imaging
- Assisted with **murine surgical procedures** and rat dissections in support of pancreatic cancer research
- Recorded and analyzed experimental data using **Microsoft Excel** and **Fiji/ImageJ**

### Sensobright Industries LLC

Jul. 2023 – Sept. 2023

*Intern*

Beaverton, OR

- Fabricated and assembled **~20 mounting brackets** for SMT machine production line using laser cutting and hand tooling
- Assisted engineers with CAD modeling, prototype fabrication, and engineering documentation