

# Ryan Slocum

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## EDUCATION

### ETH Zürich

Sep 2024–June 2026

*Master of Science ETH in Robotics, Systems and Controls*

*Zürich, Switzerland*

- Relevant Coursework: Robot Dynamics, Planning and Decision Making, Vision Algorithms for Mobile Robotics, Dynamic Programming and Optimal Control

### University of Colorado Boulder

Aug 2020–May 2024

*Bachelor of Science in Computer Science*

*Boulder, CO, USA*

- Graduated Summa Cum Laude with minor in Leadership Studies and certificate in Engineering Leadership
- Successful senior thesis entitled *Direct Vision-Based SLAM for Environments with Onboard Illumination*

## TECHNICAL SKILLS

**Languages:** C/C++, Python, C#, JavaScript, Swift, MySQL, MongoDB

**Frameworks:** ROS, Node.js, .NET Core

**Developer Tools:** Git, Docker, Github Actions, Xcode, VS Code, Visual Studio

**Hardware:** 3D Printing, SolidWorks (CSWA), Arduino, Soldering, Digital Logic

## EXPERIENCE

### Software Engineer Intern

May 2023 – Jul 2023

*Outrider*

*Brighton, CO, USA*

- Led transition in firmware testing infrastructure from Robot Framework to Python
- Worked with Hardware-in-the-Loop tester to assess flaws in vehicle controller and monitor firmware

### Robotics Intern

May 2022 – Feb 2023

*Company Six (Sphero spin-off)*

*Boulder, CO, USA*

- Managed development and user testing of CO6's consumer-facing iOS application as primary developer
- Contributed to C embedded software by developing and testing new robot behaviors
- Assisted in additional startup related tasks, including robot repair and wrangling, cloud back-end development, destructive mechanical testing, and recruiting

### Software Engineer Intern

May 2021 – Aug 2021

*Accu-Precision*

*Littleton, CO, USA*

- Developed C# desktop applications to expedite manual entry process and save hours in inspection time each week
- Implemented post-processor safety measures in CNC lathes and mills to prevent costly machine crashes
- Improved operations efficiency through development of MySQL stored procedures aimed at tracking transparency

### Teaching Assistant

Aug 2021 – Dec 2021

*University of Colorado*

*Boulder, CO, USA*

- Supervised six first-year Engineering Projects teams, providing training and support through full product life cycle
- Assisted students in usage of various tools including rapid prototyping equipment, electronics, and Arduino
- Communicated with team of TAs and professors to organize an event for students to showcase their work

## PROJECTS

### Topographic Map Carver

Dec 2021 – Feb 2021

- Converted 3D printer into CNC mill using rotary tool and 3D printed parts
- Wrote Python software pipeline to take topographic elevation data and convert it to Gcode toolpaths

### Collaborative Graphing Application

Feb 2022 – May 2022

- Developed a web application to allow users to place items or people on a two-dimensional graph
- Responsible for all back-end development, server communication, and deployment

## AFFILIATIONS

### Scholar & Website Administrator

Aug 2020 - Present

*Presidents Leadership Class*

*Boulder, CO*

- Taken three years of leadership development curriculum intended to generate extraordinary leaders of character
- Responsible for maintaining program website and managing student and alumni data