

# Ethan Steeg

[www.linkedin.com/in/ethansteeg](http://www.linkedin.com/in/ethansteeg) | [www.ethansteeg.com](http://www.ethansteeg.com)

## EDUCATION

---

**Carnegie Mellon University (CMU)** Pittsburgh, PA  
Master of Science in Mechanical Engineering May 2027  
Concentration in Robotics and Controls Systems

**Boston University (BU)** Boston, MA  
Bachelor of Science in Mechanical Engineering May 2025  
Concentration in Machine Learning; Minor in Computer Science  
GPA: 3.86/4.00 (Magna Cum Laude)

## EXPERIENCE

---

**Robotics Systems Intern** San Carlos, CA  
Robust AI August 2025 - December 2025

- Implemented ROS-based simulation tools to generate dynamic obstacles for enhanced automated testing of robot perception and navigation systems.
- Engineered automated A/B testing framework using Python, efficiently managing sequential performance comparisons across software configurations.
- Created weekly performance metrics reporting tool, automating data delivery to developers and stakeholders for rapid decision-making and regression analysis.
- Executed comprehensive pre-shipment validation testing on commercial robot systems, ensuring quality and performance compliance.

**Introduction to Engineering Design Teaching Assistant** Boston, MA  
Boston University January 2024 - May 2025

- Mentored students in design and build process of semester-long engineering projects.
- Advised and guided students for technical skills including programming for Arduino and Raspberry Pi, circuit design, CAD, and machining skills including milling, laser cutting, and 3D printing.
- Hosted weekly office hours and graded weekly assignments to offer feedback for students' performance.
- Inventoried and distributed materials and electronic parts to teams for projects.

**Robotics Engineering Intern** Berkeley, CA  
Ambi Robotics March 2021 - August 2021, May 2022 - August 2022

- Assembled large-scale commercial robot systems for mail sorting and kit assembly.
- Created AI-training datasets for robots to improve sorting and kitting duties in commercial settings.
- Analyzed robot behavior, recorded qualitative data, and diagnosed failures to troubleshoot system bugs.

## PROJECTS

---

**Automatic Dog Ball Thrower, BU Capstone Project** September 2024 - May 2025

- Won "Best Project Overall" award out of 42 mechanical engineering teams for innovation, performance, and integration.
- Led mechanical, electrical, and software design for 3-person capstone project: autonomous ball launcher that detects dog position in real time to launch safely and avoid collisions.
- Trained custom YOLOv5 computer vision dog detection model using self-labeled image data.
- Developed integrated system using Raspberry Pi for image capture and computer vision, Arduino for motor control, and custom Python/C++ code for Serial communication and real-time response.

**Autonomous Maze-Solving Robot, BU Course Project** September 2024 - December 2024

- Designed and programmed in MATLAB robotic system capable of solving ground maze using real-time camera-based image processing and motion mapping.
- Integrated OptiTrack motion capture data for real-time robot localization, enabling path mapping and memory-based navigation in the maze.

## SKILLS

---

**Mechanical:** Lathe, Laser Cutter, Water Jet, 3D Printing, Manual Mill, CNC Mill, Soldering, TIG/MIG Welding  
**Software:** CAD (SolidWorks, Onshape, NX, Fusion 360), Python, C++, Java, MATLAB, ROS, Illustrator