Steven Haener

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EDUCATION

Georgia Institute of Technology Atlanta, Georgia
Master of Science in Robotics (4.0 GPA) May 2026
Selected Coursework: Robotics Research (ROS2), AI, ML, Deep Learning, Deep RL, Networked Control, Bio-mechatronics, Advanced Dynamics, Nonlinear Controls, Robotic Dynamics/Control

University of Idaho Moscow, Idaho
Bachelor of Science in Mechanical Engineering (3.76 GPA) May 2021
Minors in Math, Music, and German | Grand Challenge Scholars Program (GCSP) founding member

WORK EXPERIENCE

Dynamic Mobility Lab (Dynamo) Atlanta, Georgia
Graduate Robotics Researcher July 2025 – Present

- Investigated the influence of introducing ground reaction force (GRF) data into the training of bipedal locomotion policies using motion capture data and imitation learning pipelines. We hypothesize that including GRF in the locomotion policy will lead to a more natural looking and stable gait for both humanoids and exoskeletons.
- Implementing policies in IsaacSim and MuJoCo to bridge the sim-to-real gap to Unitree G1 hardware.

Georgia Tech Robotarium Atlanta, Georgia
Graduate Robotics Researcher May 2025 – Present

- Migrated backend communication between robots on the testbed with the server/tracking cameras to ROS2-based client to better handle juggling synchronized tracking, real-time pose streams, and multi-robot coordination.
- Upgraded current robot hardware to include distance sensors (SLAM) and IMUs to enhance the tools provided to researchers that wish to use the Robotarium for experiments with a larger arsenal of sensors.

Laboratory for Intelligent Decision and Autonomous Robots (LIDAR) Atlanta, Georgia
Graduate Robotics Researcher Aug 2024 – Present

- Designed and developed a foot in Fusion for a bipedal Cassie robot aimed at improving walking stability, slower walking gaits, and reduced actuation effort, leading to a longer lasting robot and more natural-looking movement.
- Integrated tactile/IMU/auditory sensors using C++ with actuated tarsal segments on both sides of the foot.
- Developing Python algorithm to leverage these additional signals for classification of the terrain being walked on, informing our control system of the terrain characteristics so it can tune its strategy for increased stability.
- Writing a journal paper describing design/testing methodologies and results.

Robotics Research (ROS2) Lab Sessions Atlanta, Georgia
Graduate Robotics Researcher Aug 2024 – Dec 2024

- Gained hands-on experience implementing navigation, control, computer vision, and machine learning algorithms on TurtleBot robotics hardware using ROS2.
- Learned about ROS2 topics, nodes, pub/sub architecture, Linux, and incorporating sensor data streams in ROS2.
- The final lab involved writing an ML/CV algorithm to discern between signs in a maze to make navigation decisions and reach the goal state. Our TurtleBot successfully found the goal state and we received a 100%.

Campos Engineering, Procurement, and Construction Inc. Salt Lake City, Utah
Mechanical Engineer I June 2023 – June 2024

- Served as the engineer that assessed As-Built drawings and proctored Issued for Construction drawings for pipelines, automation systems, pumps, and control valves to service tens of thousands of homes and businesses.
- Communicated with clients about their needs and tailored drawings to their specific company standards.

Terraclear Inc. Bellevue, Washington
Mechanical Engineer Intern Nov 2021 – Mar 2022

- Collaborated with a team of mechanical and software engineers towards automating the removal of boulders from farm fields using drone-mounted cameras and an outfitted skid steer, reducing manual labor costs for farmers.
- Implemented FEA and design analysis in SolidWorks to reduce the weight of the rock picker by nearly 40%.

TECHNICAL SKILLS

Design/manufacturing: SolidWorks, Fusion, FEA, Welding, Plasma Cutting, 3D printing, CNC, CADWorx, AutoCAD
Languages/packages: Python, C++, MATLAB, ROS2, IsaacSim, MuJoCo, PyTorch, Git, Linux, Bash, Numpy