

ADRIANA HOLTZMAN

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EDUCATION

Carnegie Mellon University, Pittsburgh, PA May 2027
Bachelor of Science in Electrical and Computer Engineering GPA : 3.8/4.0
Additional Major in Robotics

RELEVANT EXPERIENCE

Draper, Undergraduate Systems Engineer, Cambridge, MA Incoming
· Work on GN&C sensor integration, testing, and data analysis as a Summer 2025 Intern

Micro Robotics Lab, Undergraduate Researcher, Pittsburgh, PA May 2024 - August 2024
· Lead project creating caudal fin actuators for autonomous fish-like robots, employing SolidWorks, Arduino, rapid prototyping, and electrical design to develop caudal fin actuator with controllable inertia-based turning capability
· Devised safe, reusable test setup to isolate electronics above water tank and track fin location underwater
· Quantified actuation control using Segmentation Tracking and MATLAB data visualization and presented project conclusions and next steps at end-of-summer lab meeting

TechSpark Machine Shop, Student Technician, Pittsburgh, PA May 2024 - Present
· Guided shop users to operate machines safely and assisted professional shop machinists in manufacturing parts
· Instructed 16+ students as Teaching Assistant for manual machining courses (24-200, 24-203)
· Tested new curriculum for 24-203 (offered beginning in Fall 2024) by machining a C-clamp with instructor

PROJECT EXPERIENCE

GPS Real Time Kinematics (RTK) Data Collection, CIA Buggy January 2024 - Present
· Lead data collection and analysis for annual University Raceday 2025 (carbon fiber gravity racing) as Data Chair, utilizing high-precision GNSS data to advise driver lines, push team selection, and energy loss analysis
· Trained team of 10+ people to collect and process RTK position data and contribute to data processing tools
· Redesigned and assembled physical RTK kits to improve performance and user friendliness during weekly Rolls

CircumNav Route Planning, Space Robotics Development January 2025 - Present
· Work to develop a circumlunar route optimization methodology using graph search algorithms and binary lunar terrain data, avoiding obstacles such as craters, shadows, and high slope regions
· Designed for CircumNav lunar rover, which will perform sun-synchronous navigation around the lunar North pole

Analog Audio Synthesizer, Build18 Hardware Hackathon October 2024 - January 2025
· Manufactured analog synth with filter, echo, and oscillator functionalities for compatibility with instruments and mic inputs
· Contributed soldering, circuit debugging, laser cutting, woodworking skills, and public speaking skills to team efforts
· Presented product and live demonstration to team of corporate sponsors as 1 of 5 selected Innov18 teams

RELEVANT COURSEWORK

Principles of Imperative Computation	Signals & Systems	Structure & Design of Digital Systems
Space Robotics Development	Linear Algebra & Vector Calculus	Differential Equations

SKILLS AND INTERESTS

Languages	C/C++, Python, MATLAB, SystemVerilog, Assembly, LaTeX, HTML, CSS
Software	SolidWorks, Arduino, Vivado, AutoCAD, KiCad, Ansys Discovery, CorelDraw, Microsoft Office
Machines	Mill, Lathe, CNC Mill, Waterjet, Laser Cutter, 3D Printer (FDM/SLA), Bandsaw
Interests	Sensing, Signal Processing, Controls, Embedded Systems, Autonomy

ACTIVITIES AND HONORS

Carnegie Involvement Association (CIA Buggy), Data Chair, Mechanic, Build August 2023 - Present
Scotch'n'Soda, Actor, Co-Head Paint Implementer, Asst. Electrician August 2023 - Present
College of Engineering Dean's List, (GPA 3.75 and above) Fall 23, Spring 24