River M. Adkins

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Education

Massachusetts Institute of Technology — Cambridge, MA
BS in Mechanical Engineering, Minor in Design — September 2022 – May 2026
Relevant Coursework: Dynamics and Controls, Fundamentals of Programming, Measurement and Instrumentation, Linear Algebra, Circuits, How to Design, Toy Product Design

Skills

Programming Languages + Tools:	Python, MATLAB, JavaScript, C, Assembly, Processing, R
Design:	SolidWorks, Adobe Illustrator, Rhino, Grasshopper

Work Experience

Self-Assembly Lab with Hyundai — Cambridge, MA
Undergraduate Researcher — Aug 2024 – Present

- Collaborating with Hyundai engineers to investigate thermal film and metal-material shape transformation.
- Developing an algorithm to design and optimize a thermobimetal cover for automobiles and moon rovers to self-regulate temperature.
- Tools used: Rhino, Grasshopper, MATLAB

Applied Invention — Cambridge, MA
Software Engineer Intern — Jun 2024 – Aug 2024

- Worked on the controls team for Applied Invention.
- Designed and deployed code to handle sensor errors in a fully automated greenhouse.
- Tools used: Python, FastAPI, Gitlab, Terraform, Docker

MIT Media Lab — Cambridge, MA
Undergraduate Researcher — Feb 2023 – June 2024

- Worked with the Affective Computing Group to develop creative therapeutic technologies for foster youth and wearable technology to aid emotion regulation for those with ASD.
- Collaborated with the Personal Robotics Group to study the potential for robots to help connect people through storytelling.
- Tools used: React.js, Processing, Circuit Design

Projects

MASLAB — Cambridge, MA
Competitor — January 2024

- This project was a part of the Mobile Autonomous Systems Laboratory competition in January 2024, where we placed second.
- The robot detected different colored blocks and towers. The robot then knocked over the tower and picked up the blocks via an actuator. We utilized ROS2 to implement a state machine that controlled PID, opencv color segmentation, and hardware control.
- Tools used: Microcontroller, ROS2, Laser cutting, 3D printing.

LED Mural Board — Cambridge, MA
ProjX Participant — January 2024

- Received a grant of $500 to create a door-shaped LED Mural Board.
- Soldered 100 LED strips together to attach them to a single power supply and controller. Used Arduino FastLED Library to create cohesive display from LEDs.
- Tools used: Microcontroller, Soldering

Extracurricular Activities

East Campus President *Leader* — Aug 2022 – Present
Since freshman year, I have worked in various positions across the East Campus dormitory's student government. I have been hall chair, room assignment chair, reopening committee member, and currently dorm president. Additionally, I have lead multiple large scale events including the dorm's Campus Preview Weekend (CPW), Pumpkin Drop, Concert, and a Carnival.