Isaac Kaplan

isaacakaplan@gmail.com

Education

Carnegie Mellon University | Pittsburgh, PA

Expected Graduation Date: May 2026

Bachelor's of Science: Mechanical Engineering Bachelor's of Science: Computer Science

GPA: 3.61/4.0

Experience

SURA Researcher | Pittsburgh, PA | Summer 2024

Carnegie Mellon University (Legged Systems Group)

- Developed an MLP Neural Network to make path predictions for a robotic prosthetic leg.
- Modified and improved upon the control code for the leg to run with the AI system.

Software-Development-Intern | Boulder, CO | Summer 2023

Software-Development-Experts

- Developed data processing software to scrape from an API and process it to extract and reformat information.
- Set up an auto-deploying website's infrastructure using Jenkins, Docker, and Kubernetes.

Carnegie Mellon Rocket Command | Fall 2022 - Fall 2023

- Programmed a Raspberry Pi to receive and decode radio broadcasts then move servos and take photos based on the contents of the transmission.

Projects

Space Hanger Project | Mechanical Design Fall 2023

- Designed a member out of acrylic to withstand a 50 lb load and thermal expansion.
- Minimized the mass to 3.7 grams which successfully held 50 lb.
- Iterated design and testing using Solidworks simulation and experimentation.

Hack-112 | Computer Science Spring 2023

- Competed in a hackathon, made a 3D world generation game with ambient and directional light to win 1st place.

Mobot Project | Mechatronics Fall 2022

- Wrote C++ for an Arduino-based mobot to follow a path using color sensors and stop at a distance from a wall.
- Won first place for my robot finishing the course the fastest in the class.

Leadership Experience

Teaching Assistant for Fundamentals of Programming (15-112)

Carnegie Mellon University | Fall 2023 - Present

- Taught recitation twice a week as well as mentoring 11 students through making a ~1000 line project from scratch.

Resident Advisor Carnegie Mellon University Fall 2023

- Present Planned large events for my housing community and used conflict resolution and mediation skills to resolve disagreements between residents.

Skills

Mechanical Engineer Skills: CAD, Matlab, Excel, Laser cutting, 3D printing, FEA, Ansys Discovery, Arduino, Raspberry Pi Computer Science Skills: Python, C, SML, VBA, Pytorch, Computer Systems, OOP, Imperative and Functional Programming