

Objective: Senior at Carnegie Mellon University's School of Computer Science, seeking a part-time job and summer internship. Passionate about artificial intelligence, computer vision, robotics, and software development. Reliable, detail-oriented, and hardworking.

Education

Carnegie Mellon University School of Computer Science

Pittsburgh, PA

Major in Artificial Intelligence, minor in Entrepreneurship (Bachelor of Science)

May 2025

Selected Coursework: Machine Learning with Graphs; Introduction to Machine Learning; Computer Vision; Human Robot Interaction; AI: Representation and Problem Solving; AI, Society, and Humanity; Concepts in Artificial Intelligence; Principles of Imperative Computation; Computational Perception; Principles of Functional Programming; Probability Theory for Computer Scientists; Fundamentals of Programming and Computer Science in Python; Great Ideas in Theoretical Computer Science; Intro to Computer Systems; Global Business; Funding Entrepreneurial Ventures;

Computer Skills: Python; C and C++; Java and Java Script; R Studio; ROS; Arduino; MATLAB; CAD; Modeling with SolidWorks and Autodesk Fusion360; web design; Unity and C#; Agile software development; Salesforce; nCino.

Research Experience

Carnegie Mellon University (Research Assistant, Summer 2023 – present, Professor Jeffrey Ichnowski's team)

- Worked on exploring the task of robots manipulating deformable objects. Studied the behavior of these objects while they are being manipulated at high-speed using computer vision and NeRFs, to better perceive and predict interactions to inform and create manipulation policies.
- Worked on Hair Simulations using NeuralHaircut from Samsung Labs, to create accurate reconstructions of an individual's unique hair anatomy, scalp, and head shape. Built upon MOE-Hair, this integration enhanced the robot's capabilities to foster safer and more personalized hairstyling experiences for individuals with limited mobility. Utilized COLMAP for accurate camera pose estimation to enhance the precision of hair strand extraction and explored the integration of dynamic manipulation techniques to enable the robot to interact effectively with its environment. Presented a Poster at the 2024 Meeting of the Minds titled *Dynamic Manipulation: Leveraging NeuralHaircut to Advance Robotic Hairstyling*.
- Research on the Robot Remote project, examining the impact of different teleoperation features on the performance of robot operation. Used a custom iPhone application and AR mapping to manipulate a Xarm – 7 robot. Created simulations of different robots in MuJoCo and used the custom application to teleoperate the simulation. Currently working on an IRB study and publication.
- Set up Yaskawa's GP12 robot with ROS compatibility at the National Robotics Engineering Center (NREC) and used Kalibr to calibrate cameras in a panoptic studio.

Carnegie Mellon University (Research Assistant, Spring 2022 - Professor Zachary Manchester's team)

- Worked on the PocketQube project, a 5cm cube satellite.
- Made changes to structural pieces in the preexisting PyCubed hardware library to accommodate the new PocketQube printed circuit boards and created working models and assemblies for all components.

Discovery Lab Global (Research Intern, 2019 – 2020)

- Led a team focused on modifying an RC car as an AI testbed using the NVIDIA Jetson Nano AI computer and involving AI technologies for autonomous vehicles.
- Analyzed and reverse engineered the “Pong from Pixels” program created by Andrej Karpathy. Learned the technicalities of efficient collaboration with a virtual team using FireStorm (Second Life) Virtual Reality application and how to conduct a research project.
- Wrote a Technical Document on the SmartPong program describing the functionality of the Python code. Worked on improving the functionality of the SmartPong using Tensorflow.
- Special project-worked with Airforce representative to prepare recommendations about how to organize a Virtual Reality environment with publicly available information.
- Presented at the National Aerospace and Electronics Conference, “Intro to AI Deep Learning Fundamentals using the SmartPong Program”, part of Discovery Lab Global session.

Work Experience**Key Bank** (Summer Intern, 2022)

- 10-week internship in the Key Technology, Operations and Services division.
- Worked in the Salesforce and nCino team to create a data dictionary for nCino objects to be used by all team members.

Carnegie Mellon University (AI Maker Space Assistant, 2022 - 2023)

- Subject matter expert in the use of the Fetch Mobile Manipulator.
- Created documentation for use of Fetch and provided technical assistance to students on how to use Fetch.
- Gave AI Maker space tours.

Center Of Science and Industry (Apprentice, 2019 – 2020)

- Trained, evaluated and mentored lead volunteers and volunteers.
- Participated in the selection of new volunteers.
- Performed COSI science experiments and provided science experiences and customer service.
- 1000+ volunteer hours

Awards:

- 2024 – Dean’s List High Honors (Fall 2024)
- 2019 – 2021 – Award for Aspirations in Computing, National Center for Women and Information Technology, National Honorable Mention, Ohio affiliate winner, three consecutive awards.