

Mavis Murdock

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Education

- Expected 2027 **Tufts University**, *Computer Science PhD Student*, Medford, MA.
Advisor: Elaine Short
- May 2022 **Mount Holyoke College**, *B.A Computer Science and Classics*, South Hadley, MA.
Cum Laude

Research

- September 2022 - Present **Research Assistant (AABL Lab)**, *Tufts University*, Medford MA.
- June - July 2021 **Research Experience for Undergraduates**, *New Mexico Tech*, Socorro, NM.
- Conducted research into the efficacy of different machine learning techniques for malware detection
 - At the midterm and final REU presentations, summarized research in oral presentations to professors and other undergraduates
 - Gave presentation on research to high-schoolers
 - Organized final results into a poster and final paper

Selected Publications

Isaac Sheidlower, **Mavis Murdock**, Emma Bethel, Reuben M. Aronson, Elaine Schaertl Short. "Online Behavior Modification for Expressive User Control of RL-Trained Robots". *ACM/IEEE Conference on Human-Robot Interaction (HRI)*, Boulder CO, 2024

Eva Domschot, Jeffrey Begaye, **Mavis Murdock**, Ramyaa Ramyaa. (Manuscript in Progress). "Exploration of Machine Learning Techniques for Botnet Detection"

Experience

Projects

- January 2020 **Mr. Meter Machine**, *Classics Department*, Mount Holyoke College.
- <https://rosehairtarantula.github.io/Mr-Meter-Machine/>
 - Used NodeJS to build a tool for teaching scansion to students in the college's introductory Greek course
 - The site allows users to choose lines from the *Iliad* and practice marking syllables as long and short
 - Used feedback from students and the professor to improve the program and make it more user-friendly

Technical

- January 2019 **Senior Web Programmer**, *Library and Technology Services*, Mount Holyoke College.
- May 2022
- Helped the web team handle emerging challenges and maintained existing work
 - Updated log scripts for the college's Shibboleth IdP <https://github.com/mtholyoke/idp-utilities>
 - Wrote Python script to find the most recent access/modification dates of legacy websites supported by the college
 - Created functionality for the LITS (Library, Information Technology Services) website to display service desk hours
 - Worked primarily with HTML, CSS, JavaScript, PHP, and Python

- February - **Webmaster**, *HackHolyoke 2020*, Mount Holyoke College.
November 2020
- <https://rosehairtarantula.github.io/HackHolyoke2020/>
 - Built and managed the website for HackHolyoke 2020
 - Created and maintained the discord server for the event
 - Worked with marketing and graphic design to create a comprehensive and cohesive brand

Participation

- April 2023 **Grad Cohort for Women**, *Computing Research Association (CRA-WP)*.
- Participated in a 2-day conference and attended a series of presentations and discussions
 - Interacted with senior female computing-related researchers and professionals as well as graduate student peers
- July - August 2020 **REBLs Summer Leadership Academy**, *University of Massachusetts Amherst*.
- Participated in a 6-week program created with grant from from the Melinda Gates Company Pivotal Ventures
 - Was part of a cohort of 54 students (selected from over 100 applicants) from diverse backgrounds
 - Spent 120 hours in class and on assignments, hearing from 35 speakers from industry and academia
 - Spent 20 hours in interactive negotiation exercises and problem solving around case studies

Outreach

October 2023 **RoboBoston, Annual Block Party.**

- Ran robot demonstration showcasing the lab's current research

TA/Mentoring

January 2024 **TA (Robotics Teaching Lab), Computer Science Department, Tufts University.**

- Current
 - Held drop-in office hours 3 times per week
 - Created and maintained documentation for the robots
 - Provided support for debugging robots

September - **TA (Intro to Human-Robot Interaction), Computer Science Department, Tufts**
December University.

- 2023
 - Presented current research
 - Held twice-weekly drop-in office hours
 - Graded assignments
 - Provided support for debugging robots

January - **TA (Probabilistic Robotics), Computer Science Department, Tufts University.**

- May 2023
 - Held twice-weekly drop-in office hours
 - Graded assignments
 - Provided support for debugging robots

January **Computer Science TA/Grader (CS 122, CS 322), Computer Science Department,**
2021-May Mount Holyoke College.

- 2022
 - Held twice-weekly drop-in meetings to help students with concepts and assignments
 - Reviewed and ran initial testing on homework assignments

September - **Computer Science Peer Mentor, Computer Science Department, Mount Holyoke**
December College.

- 2021
 - Held once-weekly meetings with 8 mentees (helped with course concepts, discussed strategies for managing workload, recommended future courses)
 - Handled related administrative tasks (scheduling meetings, checking in with instructors)

Skills

Programming C/C++, Python, Javascript, Java, PHP, HTML, CSS

Language English (fluent), Ancient Greek (intermediate), Latin (advanced), Spanish and Italian (beginner)

Selected Coursework AI, Probabilistic Robotics, Intro to ROS, Intro to HRI, Operating Systems, Compilers, Computing Systems, Theory of Computation, NLP

Honors/Awards

2018-2022 **Leadership Award, Mount Holyoke College.**

2020-2022 **Patricia Ray '75 Endowed Scholarship (Classics)**, Mount Holyoke College.