

Monish Reddy Kotturu

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EDUCATION

University of Massachusetts Lowell

M.S. in Computer Science

Lowell, MA

Sep. 2023 – May 2024

University of Massachusetts Lowell

B.S. in Computer Science, Minor in Mathematics; GPA: 3.823; Honors College; Dean's List

Lowell, MA

Sep. 2020 – May 2023

EXPERIENCE

Graduate Research Assistant

August 2023 – Present

The AI Institute for Collaborative Assistance and Responsive Interaction for Networked Groups

Lowell, MA

- Extending my prior multi-agent multi-armed bandit work to involve contextual bandits and agents with varying levels of competencies in a healthcare setting

Undergraduate Research Assistant

Sep 2020 – Present

Army Research Lab - Strengthening Teamwork for Robust Operations in Novel Groups

Lowell, MA

- Implemented optimization algorithms on team networks in the multi-agent multi-armed bandit framework to improve team performance
- Used parallel processing and a JIT compiler to speed up the simulations over 500x which allowed for faster and easier testing

Undergraduate Research Assistant

Sep 2020 – Present

Army Research Lab - Strengthening Teamwork for Robust Operations in Novel Groups

Lowell, MA

- Created a 2D browser game to evaluate human-robot trust in a search and rescue situation
- Deployed over 30 variations with different game conditions to conduct virtual experiments through Amazon MTurk and automated the analysis of the study results by developing pipelining scripts

Frontend Web Developer intern

Jun 2021 – Sep 2021

Kaizntree

Remote (Sydney, Australia)

- Programmed GUI components using Vue.js that interact with a REST API in Django to retrieve and display information and provide inputs for the user to modify data in a web application
- Debugged existing components and designed a user experience to minimize user effort and time

PROJECTS

Medication Delivery Robot | ROS, OpenCV

March 2023 – April 2023

- Designed and implemented a working prototype of a medication delivery robot with a high level of autonomy that uses face detection and autonomous navigation to deliver medication to older adults in an assisted living facility

Northeast Robotics Colloquium Website | HTML, Tailwindcss, JS, Leaflet, Vite

Jun 2022 – Oct 2022

- Created the website for NERC 2022, which is a research meeting, job-fair, and a show case for established and upcoming robot companies in the Northeast US and Canada
- Maintained up-to-date information about the event details such as schedule, location, registration, and more

PUBLICATIONS

- Zahra Rezaei Khavas, Monish Reddy Kotturu, Russell Purkins, S. Reza Ahmadzadeh, Paul Robinette, "The Effect of Performance-Based Compensation on Crowdsourced Human-Robot Interaction Experiments," Journal of Software vol. 18, no. 3, pp. 117-129, 2023.
- Perkins, R., Khavas, Z. R., McCallum, K., Kotturu, M. R., & Robinette, P. (2022, December). The Reason for an Apology Matters for Robot Trust Repair. In International Conference on Social Robotics (pp. 640-651). Cham: Springer Nature Switzerland.

TECHNICAL SKILLS

Languages: Python, HTML/CSS/JavaScript, C/C++, L^AT_EX

Frameworks and Technologies: React.js, Node.js, Tailwind CSS, Heroku, MongoDB

Developer Tools: Git, VS Code, Vim, Visual Studio

Libraries: NumPy, Matplotlib, jQuery