Hang Yu

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Overview

My current research focuses on **Human-Centered AI** in **Robotics**, **Learning from Human Feedback**, and **Learning from Demonstrations**. I worked on Data Mining and Recommendation Systems for three years. I have seven years of programming competition experience. I love games, books, and, of course, my cats.

Keywords: Human-Robot Interaction, Reinforcement Learning from Human Feedback, Recommendation Systems

Skills

Programming Languages: Python(PyTorch, OpenCV, SB3), Java, JavaScript, MATLAB, C++, C#, SQL, Pascal
Software: ROS, JASP, MCP, Git, LaTeX, Qualtrics
Hardware: Kinova Gen2/Gen3/Gen3-lite, Fetch, UR5, Misty II, Cozmo, Sphero BOLT
Knowledge: Robotics, Reinforcement Learning from Human Feedback, Learning from Demonstrations, LLM Fine Tuning, Human-Subject Studies, Statistic Analysis, Data Mining, Recommendation System

Education

Tufts University Medford, MA
Ph.D. in Computer Science, GPA: 4.0/4.0 April 2026(expected)
Advisor: Dr. Elaine Schaertl Short

Tufts University Medford, MA
M.S.E. in Computer Science, GPA: 3.95/4.0 Jan. 2021
Advisor: Dr. Elaine Schaertl Short

Publications

Conference Publications

C6 **Hang Yu**, James Staley, Shijie Fang, Jindan Huang, Wenchang Gao, Reuben M. Aronson, and E. Short, PHIRL: Progress-Heuristicized Inverse Reinforcement Learning, AAAI 2026 (Under Review, **Phase two**)

C5 **Hang Yu**, Reuben M. Aronson, Katherine H. Allen, and E. Short, *From "Thumbs Up" to "10 out of 10": Reconsidering Scalar Feedback in Interactive Reinforcement Learning* 2023 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Detroit, USA, 2023.

C4 **Hang Yu**, Qidi Fang, Shijie Fang, Reuben M. Aronson, and E. Short, *How Much Progress Did I Make? An Unexplored Human Feedback Signal for Teaching Robots* 2024 IEEE RO-MAN, Pasadena, USA

C3 Matthew Ebisu*, **Hang Yu***, Reuben M. Aronson, Elaine S. Short, *See What I Mean? Expressiveness and Clarity in Robot Display Design*, IEEE RO-MAN 2025, Eindhoven, the Netherlands.

C2 Qidi Fang*, **Hang Yu***, Shijie Fang, Jindan Huang, Qiuyu Chen, Reuben M. Aronson, Elaine S. Short, *CHARM: Considering Human Attributes for Reinforcement Modeling*, IEEE RO-MAN 2025, Eindhoven, the Netherlands.

C1 Shijie Fang*, **Hang Yu***, Qidi Fang, Reuben M. Aronson, Elaine Schaertl Short, *Demonstration Sidetracks: Categorizing Systematic Non-Optimality in Human Demonstrations*, IEEE RO-MAN 2025, Eindhoven, the Netherlands.

* means these authors contributed equally to the work.

Journal Publications

J3 Tan, Z., **Yu, H.**, Wei, W., & Liu, J. (2020). *Top-K interesting preference rules mining based on MaxClique.* Expert Systems with Applications, 143, 113043.

J2 **YU Hang**, WEI Wei, TAN Zheng, LIU Jing-lei. *Contextual Preference Collaborative Measure Framework Based on Belief System.*Computer Science, 2020, 47(4): 74-84.

J1 TAN, Z., LIU, J., & **YU, H.** (2017). *Conditional preference mining based on MaxClique.* Journal of Computer Applications, 37(11), 3107.

Doctoral Consortium & Workshop Papers & Abstracts

DC1 **Hang Yu** *Enabling Robust Learning from Non-Experts by Leveraging Human Demonstrations and Human Feedback.* IEEE ICRA 2025 Doctoral Consortium, Atlanta, USA

W3 **Hang Yu**, James Staley, Shijie Fang, Wenchang Gao, Reuben M. Aronson, and Elaine S. Short *PHIRL: Progress Heuristic for Inverse Reinforcement Learning*. RSS workshop 2025: Continual Robot Learning from Humans

W2 **Hang Yu** and Elaine Schaertl Short. 2021. *Active Feedback Learning with Rich Feedback*. In Companion of the 2021 ACM/IEEE International Conference on Human-Robot Interaction (HRI '21 Companion). Association for Computing Machinery, New York, NY, USA, 430–433.

W1 **Hang Yu** and Elaine Schaertl Short. *Learning with Dynamic Feedback.* RSS workshop 2020: Closing the Academia to Real-World Gap in Service Robotics.

Projects

Single Cell Aging Prediction with Gemma3
Ongoing Research Project.
A **Fine-tuned** Gemma3 12B model with **customized vocab** for predicting the age of single cells
Github: `https://github.com/HangYu8123/SC_Ageing_Prediction.git`

Phoenix Gaming Studio, Founded by Yantai University
Leader and Founder of the gaming developing Team
Game developing and game GUI designing using C# and Unity, writing game scripts

Honors/Awards

ICRA Doctoral Consortium 2025
Selected to participate in the ICRA Doctoral Consortium, a yearly workshop that provides an opportunity for Ph.D. students to discuss and explore their research interests and career objectives with a panel of established researchers

RO-MAN Travel Grant 2024
The RO-MAN 2024 is committed to supporting students and increasing the diversity of the field of HRI. The winners will receive complimentary registration and a travel award.

Yantai University Outstanding Student Scholarship 2017
This prize was awarded to students at Yantai University who have demonstrated exceptional performance in academia or student competitions during the current year.

Lanqiao Programming Competition National First Prize 2016
The largest programming competition in China. The top 10% participants in the state competition were selected to the Lanqiao National Programming competition. This prize was awarded to participants who were in the top 5% in the Lanqiao National Programming competition (**Top 0.5%** among all the participants).

Teaching/Mentoring/Outreach

Mentor

Matthew Ebisu, Master's Student, Co-author of C3, Tufts University	2021–2024
Shijie Fang, Master's Student, Co-author of C4, C1, C2, Tufts University	2023–2024
Qidi Fang, Master's Student Co-author of C4, C1, C2, Tufts University	2023–2024

Panelist & Keynote Presenter

ICRA Undergraduate Research Panelist	2025
Keynote Presenter at First Robotics Competition Conference NE	2024
DIAMOND Program Panelist	2023

Teaching Assistant

Ethics for AI, Robotics, and Human-Robot Interaction, Tufts University	Spring 2024, Spring 2025
Human-Robot Interaction, Tufts University	Fall 2022
Human-Computer Interaction, Tufts University	Spring 2021

Professional Service

Reviewer

Reviewer for AAAI Conference on Artificial Intelligence (AAAI)	2026
Reviewer for International Conference on Human-Robot Interaction (HRI)	2021, 2022, 2023, 2024
Reviewer for International Conference on Robotics and Automation (ICRA)	2023, 2024, 2025
Reviewer for Conference on Robot Learning (CoRL 2025)	2025
Reviewer for International Conference on Autonomous Agents and Multiagent Systems (AAMAS)	2023

Organizer/Co-organizer

Tufts AABL Lab Hackathon	2021–present
Tufts Human-Robot Interaction Reading Group	2020–present

Student Volunteer

IEEE International Conference on Robot and Human Interactive Communication	2024
Tufts Computer Science Student Council	2023, 2024, 2025
ACM/IEEE International Conference on Human-Robot Interaction (HRI)	2021