Ravi Pandya

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Education

08/2020–Present	**Robotics PhD Student**, *Carnegie Mellon University, Robotics Institute.* Advisors: Changliu Liu, Andrea Bajcsy, GPA: 4.17/4.0
08/2015–05/2019	**BS, Electrical Engineering and Computer Science**, *University of California, Berkeley.* Cumulative GPA: **3.86**/4.0, Graduated with Honors

Selected Coursework.

Robotics, Optimal Control, Adaptive Control, Convex Optimization, Human-Robot Interaction, Linear Systems, Nonlinear Systems, Machine Learning, Deep Learning, Computer Vision, Physics

Publications

[9] **R. Pandya***, M. Zhao*, C. Liu, R. Simmons, H. Admoni, "Multi-Agent Strategy Explanations for Human-Robot Collaboration," *submitted to International Conference on Robotics and Automation (ICRA),* 2024.

[8] **R. Pandya***, Z. Wang*, Y. Nakahira, C. Liu, "Towards Proactive Safe Human-Robot Collaboration via Data-Efficient Conditional Behavior Prediction," *submitted to International Conference on Robotics and Automation (ICRA),* 2024.

[7] T. Wei, L. Ma, **R. Pandya**, C. Liu, "Robust Safe Control with Multi-Modal Uncertainty," *submitted to IEEE Control Systems Letters (L-CSS),* 2024.

[6] **R. Pandya**, T. Wei, C. Liu, "Multimodal Safe Control for Human-Robot Interaction," *submitted to American Control Conference (ACC),* 2024.

[5] **R. Pandya**, C. Liu, "Safe and Efficient Exploration of Human Models during Human-Robot Interaction," *International Conference on Intelligent Robots and Systems (IROS),* 2022.

[4] **R. Pandya***, S.H. Huang*, I. Huang*, A.D. Dragan, "Nonverbal Robot Feedback for Human Teachers," *Conference on Robot Learning (CoRL),* 2019 **(oral, acceptance 5.3%)**.

[3] **R. Pandya**, S.H. Huang, D. Hadfield-Menell, A.D. Dragan, "Human-AI Learning Performance in Multi-Armed Bandits," *Conference on Artificial Intelligence, Ethics, and Society (AIES),* 2019.

[2] A. Nagabandi, G. Yang, T.H. Asmar, **R. Pandya**, G. Kahn, S. Levine, R. Fearing, "Learning Image-Conditioned Dynamics Models for Control of Under-Actuated Legged Millirobots," *International Conference on Intelligent Robots and Systems (IROS),* 2018 **(best paper award finalist)**.

[1] A. Bestick, **R. Pandya**, R. Bajcsy, A.D. Dragan, "Learning Human Ergonomic Preferences for Handovers," *International Conference on Robotics and Automation (ICRA),* 2018.

Awards and Honors

2020	**National Science Foundation Graduate Research Fellowship**, (15% acceptance).
11/2019	**Oral Presentation at CoRL 2019**, (5.3% acceptance).
10/2018	**Best Paper Award Finalist at IROS 2018**, (of 1000 accepted papers).

Mentorship and Teaching

Spring 2023	**Human-Robot Interaction - Foundations**, *Teaching Assistant.*
Spring 2022	**Human-Robot Interaction - Foundations**, *Teaching Assistant.*

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*equal contribution

2021-2022	**CMU Graduate Application Support Program**, *Mentor.*
2021-2023	**CMU Undergraduate AI Mentoring**, *Mentor.*
Fall 2018	**Intro to Robotics**, *Undergraduate Student Instructor.*
Summer 2018	**Interact Lab Summer Internship**, *Mentor.*
Spring 2019	**Feedback Control Systems**, *Reader/Tutor.*
Spring 2018	**Designing, Visualizing and Understanding Deep Neural Networks**, *Reader/Tutor.*

Research / Professional Experience

09/2020-Present	**CMU Robotics Institute**, *Advisors: Prof. Changliu Liu, Prof. Andrea Bajcsy.* Working on safe control under uncertainty around humans
09/2019-09/2020	**Ericsson (Global AI Accelerator)**, *Data Scientist*, Santa Clara, CA. Used multi-agent deep reinforcement learning algorithms to tune parameters in a radio network
01/2018–07/2019	**UC Berkeley Interact Lab**, *PI: Prof. Anca Dragan.* Worked on modeling how physical actions can communicate and gather information
11/2016-09/2017	**UC Berkeley Human-Assistive Robotic Technologies Lab**, *PI: Prof. Ruzena Bajcsy.* Worked on learning human ergonomic preferences in human-robot object handovers

Languages/Technical Skills

Human	English, Gujarati, Japanese
Robot	Python, MATLAB, Julia, C, Java, Ruby, Linux / command line
Libraries	Numpy / Scipy / Pandas, PyTorch, Robot Operating System (ROS), Rllib, PsiTurk
Hardware	Kinova Gen3, Baxter/Sawyer, Turtlebot, FANUC LR Mate 200iD