

Yilin Wu

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ACADEMIC BACKGROUND

Carnegie Mellon University, Pittsburgh PA 2023 - 2028 (expected)
Ph.D. in Robotics, School of Computer Science
Advisor: Andrea Bajcsy

Stanford University, Stanford CA 2021 - 2023
M.S. in Computer Science, Artificial Intelligence
Advisor: Dorsa Sadigh

Shanghai Jiao Tong University, Shanghai China 2016 - 2020
B.S. in Information Security

University of California, Berkeley, Berkeley CA 2019.1 - 2019.9
Exchange Student in Electrical Engineering and Computer Science
Advisor: Pieter Abbeel

EXPERIENCE

The Interactive and Trustworthy Robotics Lab (Intent Lab), CMU
PhD Student 2024.5 - Present
Advised by Andrea Bajcsy
Research on embodied alignment and continual learning for robotic manipulation in the human-centered environment.

Nvidia Corporation, Santa Clara, CA
Research Intern 2025.5 - Present
Developed methods runtime steering methods for text-action alignment to enable long-horizon manipulation with large reasoning Vision Language Action Models in Seattle Robotics Lab.

The Robots Perceiving and Doing Lab (R-Pad Lab), CMU
PhD Student 2023.10 - 2024.4
Advised by David Held
Research on applying reinforcement learning and flow-based methods for long-horizon, contact-rich manipulation, with robust generalization across object geometries, tool morphologies, and diverse tasks.

The Intelligent and Interactive Autonomous Systems Group (ILIAD Lab)
Master Student 2021.9 - 2023. 6
Advised by Dorsa Sadigh
Research on assistive feeding including bimanual food acquisition and reactive in-mouth bite transfer as well as affordance-based imitation learning for bimanual manipulation.

Nvidia Corporation, Santa Clara, CA
Research Intern 2022.6 - 2022.9
Developed methods to improve the efficiency of model-based distributed reinforcement learning in Applied Deep Learning Research Team.

Shanghai Qi Zhi Institute, Shanghai
Research Assistant 2020.9 - 2021.5
Advised by Yi Wu
Developed methods to improve reinforcement learning algorithms with self-imitation for robotic tasks by automatically discovering subgoals from value function.

Berkeley Artificial Intelligence Research Lab (BAIR Lab), UC Berkeley

Undergraduate Researcher 2019.1 - 2019.9
Advised by Pieter Abbeel
 Proposed a conditional pick-and-place action space and developed a reinforcement learning method with spatial action maps for deformable object manipulation.

PUBLICATIONS

- [11] **Yilin Wu**, Ran Tian, Gokul Swamy, Andrea Bajcsy, From Foresight to Forethought: VLM-In-the-Loop Policy Steering via Latent Alignment. *Robotics: Science and Systems (RSS)*, 2025, **Best Paper Award at ICLR World Model Workshop**
- [10] Ran Tian, **Yilin Wu**, Chenfeng Xu, Masayoshi Tomizuka, Jitendra Malik, Andrea Bajcsy, Maximizing Alignment with Minimal Feedback: Efficiently Learning Rewards for Visuomotor Robot Policy Alignment. In submission to Foundation Models and Neural-Symbolic AI for Robotics. Special Issue in The International Journal of Robotics Research (IJRR) 2025.
- [9] Carl Qi^{*}, **Yilin Wu**^{*}, Lifan Yu, Haoyue Liu, Bowen Jiang, Xingyu Lin[†], David Held[†]. Learning Generalizable Tool-use Skills through Trajectory Generation. *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2024.
- [8] Bowen Jiang^{*}, **Yilin Wu**^{*}, Wenxuan Zhou, Chris Paxton, David Held. Spatially-Grounded Motion Primitives for Manipulation. *Robotics: Science and Systems (RSS)*, 2024.
- [7] Alexander Khazatsky^{*}, Karl Pertsch^{*}, ... , **Yilin Wu**, DROID: A Large-Scale In-the-Wild Robot Manipulation Dataset. *Robotics: Science and Systems (RSS)*, 2024.
- [6] Abby O'Neill, ... , **Yilin Wu**, Open X-Embodiment: Robotic Learning Datasets and RT-X Models. *International Conference on Robotics and Automation (ICRA)*, 2024. **Best Paper Award**
- [5] Jennifer Grannen, **Yilin Wu**, Brandon Vu, Dorsa Sadigh. Stabilize to Act: Learning to Coordinate for Bimanual Manipulation. *The Conference on Robot Learning (CoRL)*, 2023, **Oral Presentation**
- [4] Lorenzo Shaikewitz^{*}, **Yilin Wu**^{*}, Suneel Belkhale^{*}, Jennifer Grannen, Priya Sundaresan, Dorsa Sadigh. In-Mouth Robotic Bite Transfer with Visual and Haptic Sensing. *International Conference on Robotics and Automation (ICRA)*, 2023
- [3] Jennifer Grannen^{*}, **Yilin Wu**^{*}, Suneel Belkhale, Dorsa Sadigh. Learning Bimanual Scooping Policies for Food Acquisition. *The Conference on Robot Learning (CoRL)*, 2022
- [2] Yunfei Li, **Yilin Wu**, Huazhe Xu, Xiaolong Wang, Yi Wu. Solving Compositional Reinforcement Learning Problems via Task Reduction. *The International Conference on Learning Representations (ICLR)*, 2021
- [1] **Yilin Wu**^{*}, Wilson Yan^{*}, Thanard Kurutach, Lerrel Pinto, Pieter Abbeel. Learning to Manipulate Deformable Objects without Demonstrations. *Robotics: Science and Systems (RSS)*, 2020

AWARDS

Graduated with Honor (Outstanding Graduate of Shanghai)	2020
Hongyi Scholarship	2019
National Scholarship	2017

ACADEMIC SERVICE

External Reviewer for Conferences, Journals

- IEEE Robotics and Automation Letters (RAL): 2024

- International Symposium of Robotics Research (ISRR): 2024
- Conference on Robot Learning (CoRL): 2024, 2025
- International Conference on Intelligent Robots and Systems (IROS): 2023, 2024
- Robotics: Science and Systems (RSS): 2024, 2025
- International Conference on Robotics and Automation (ICRA): 2024, 2025
- International Conference on Learning Representations (ICLR): 2024, 2025

Teaching Assistant for Computer Science Courses

- Carnegie Mellon University 16-831: Introduction to Robot Learning
(Fall 2024)
- Stanford CS 221: Artificial Intelligence: Principles and Techniques
(Spring 2023, Spring 2022, Fall 2021)
- Stanford CS 148: Introduction to Computer Graphics and Imaging
(Fall 2022)
- Stanford CS182: Ethics, Public Policy, and Technological Change
(Winter 2023, Winter 2022)