

Abhay Deshpande (He/Him)

Seattle, WA | a.deshpande012@gmail.com | abhaybd.github.io/ | /in/abhaybd/ | github.com/abhaybd

Education

University of Washington, BS in Computer Science and BA in Math June 2024

- GPA: 3.97/4.0
- Completed graduate-level coursework in: Machine Learning, Reinforcement Learning, and Robotics

Publications

- A. Deshpande, Y. Deng, A. Ray, J. Salvador, W. Han, J. Duan, K.H. Zeng, Y. Zhu, R. Krishna, R. Hendrix. "GraspMolmo: Generalizable Task-Oriented Grasping via Large-Scale Synthetic Data Generation". Preprint 2025.
- A. Deshpande, L. Ke, Q. Pfiefer, A. Gupta, S. Srinivasa. "Data Efficient Behavior Cloning for Fine Manipulation via Continuity-based Corrective Labels". IROS 2024 (Oral).
- L. Ke*, Y. Zhang*, A. Deshpande, S. Srinivasa, A. Gupta. "CCIL: Continuity-based Data Augmentation for Corrective Imitation Learning". ICLR 2024.
- Y. Zhang*, L. Ke*, A. Deshpande, A. Gupta, S. Srinivasa. "Cherry Picking with Reinforcement Learning". RSS 2023.

Experience

Predoctoral Researcher, PRIOR @ Allen Institute for AI September 2024 – Present

- Performed research in learning for robotic manipulation on a variety of real-world platforms
- Published papers in robotic manipulation that advance the state-of-the-art
- Leveraged large foundational VLMs and LLMs to apply modern AI to challenging robotic problems
- Heavily utilized simulation for large-scale data collection and pretraining, including platforms like MuJoCo

Undergrad Researcher, Personal Robotics Lab @ UW June 2021 – June 2024

- Performed research in learning for robotic manipulation on real-world platforms, primarily focusing on a chopsticks robot for fine manipulation
- Leveraged data-driven control algorithms in Reinforcement Learning and Imitation Learning to create state-of-the-art robot policies that outperform humans and other baselines
- Experimented extensively with simulation platforms, using platforms such as MuJoCo and PyBullet

Robotics Software Engineering Intern, NASA Jet Propulsion Laboratory June 2023 – September 2023

- Built and maintained tools that supported the planning process for the Curiosity Mars rover
- Automated target evaluations and safety checks for the rover's arm, speeding up planning process by >10x

Software Engineering Intern, Meta June 2022 – September 2022

- Worked on the AI Security team, coordinating with other engineers to control access to business-critical AI assets
- Used C++ and Python to implement a Cython client for key service in AI infrastructure, handling $\approx 20K$ QPS
- Created internal tools with React and a PHP backend that enabled flexibility and insight into security controls

Projects

Husky Robotics Team @ UW, Software Lead October 2020 – June 2024

- Leader of the software subsystem, developing a full robotics stack for the URC and CIRC rover challenges
- Led team to accomplish long-term goals, finishing in the top 3 in CIRC 2022, CIRC 2023, and CIRC 2024
- Championed inclusion and diversity, broadening outreach to new members and improving gender diversity
- Substantially improved existing codebase, leading to >3x increase in unit tests and better code quality