PATRICK YIN

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EDUCATION

University of Washington

2023 -

Ph.D. Computer Science & Engineering

GPA: 4.0/4.0

University of California, Berkeley

2019-2023

B.A. Computer Science

GPA: 4.0/4.0

Awards: Regents' and Chancellor's Scholar, top < 2% incoming class; National Merit Scholar

PUBLICATIONS

DROID: A Large-Scale In-the-Wild Robot Manipulation Dataset

Alexander Khazatsky*, Karl Pertsch*, ..., **Patrick Yin**, ..., Sergey Levine, Chelsea Finn Robotics: Science and Systems (RSS), 2024

ASID: Active Exploration for System Identification and Reconstruction in Robotic Manipulation

Marius Memmel, Chuning Zhu, Andrew Wagenmaker, **Patrick Yin**, Dieter Fox, Abhishek Gupta International Conference on Learning Representations (ICLR), 2024 (Oral Presentation)

Stabilizing Contrastive RL: Techniques for Robotic Goal Reaching from Offline Data

Chongyi Zheng, Benjamin Eysenbach, Homer Walke, **Patrick Yin**, Kuan Fang, Ruslan Salakhutdinov, Sergey Levine International Conference on Learning Representations (ICLR), 2024 (Spotlight Talk)

Open X-Embodiment: Robotic Learning Datasets and RT-X Models

Open X-Embodiment Collaboration, ..., Patrick Yin, ...

IEEE International Conference on Robotics and Automation (ICRA), 2024 (Best Paper)

Generalization with Lossy Affordances: Leveraging Broad Offline Data for Learning Visuomotor Tasks

Kuan Fang, **Patrick Yin**, Ashvin Nair, Homer Walke, Gengchen Yan, Sergey Levine Conference on Robot Learning (CoRL), 2022 (Oral Presentation)

Planning to Practice: Efficient Online Fine-Tuning by Composing Goals in Latent Space

Kuan Fang*, Patrick Yin*, Ashvin Nair, Sergey Levine (* indicates equal contribution)

IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS). 2022

Bisimulation Makes Analogies in Goal-Conditioned Reinforcement Learning

Philippe Hansen-Estruch, Amy Zhang, Ashvin Nair, Patrick Yin, Sergey Levine

International Conference on Machine Learning (ICML), 2022

PREPRINTS

Rapidly Adapting Policies to the Real-World via Simulation-Guided Fine-Tuning

Patrick Yin*, Tyler Westenbroek*, Simran Bagaria, Kevin Huang, Ching-An Cheng, Andrey Kolobov, Abhishek Gupta (* indicates equal contribution)

Submitted to International Conference on Learning Representations (ICLR), 2025

SwipeRL: A Reinforcement Learning System for Grasping in Clutter through Non-Prehensile Pre-Grasp Motion

Kai Kwan Fung, Jack Lowry, Boling Yang, Thomas Kaminsky, **Patrick Yin**, Markus Grotz, Maya Cakmak, Joshua R. Smith, Abhishek Gupta

Submitted to IEEE International Conference on Robotics and Automation (ICRA), 2025

EXPERIENCE

| Sim-to-real transfer and real-world finetuning for dexterous robotic manipulation. Undergraduate Researcher, Berkeley AI Research — Advised by Sergey Levine 2020–20 Offline goal-conditioned reinforcement learning and finetuning with affordance models for real-world robotic control. Machine Learning Engineer Intern, Ambi Robotics 20 Spearheaded training deep learning models on real-world production data and training 3D neural networks. Software Engineer Intern, UiPath 20 Pushed over 30 Git commits to production on Insights team. Worked with Snowflake/SQL, Kubernetes, and Dock PROFESSIONAL SERVICE Conference Reviewer IEEE International Conference on Robotics and Automation (ICRA) 20 Conference on Robot Learning (CoRL) 20 Computer Vision and Pattern Recognition Conference (CVPR) 20 UW CSE PhD Admissions Reviewer 20 UTREACH AND SERVICE UW Robotics Lab Outreach Coordinator 20 UAW 4121 Cohort Liaison 2023–20 UW U-PASS Student Advisory Board Member 2023–20 UW U-PASS Student Advisory Board Member | EXPERIENCE | |
|---|--|---------------------------------|
| Offline goal-conditioned reinforcement learning and finetuning with affordance models for real-world robotic control. Machine Learning Engineer Intern, Ambi Robotics Spearheaded training deep learning models on real-world production data and training 3D neural networks. Software Engineer Intern, UiPath Pushed over 30 Git commits to production on Insights team. Worked with Snowflake/SQL, Kubernetes, and Dock PROFESSIONAL SERVICE Conference Reviewer IEEE International Conference on Robotics and Automation (ICRA) Conference on Robot Learning (CoRL) Computer Vision and Pattern Recognition Conference (CVPR) UW CSE PhD Admissions Reviewer OUTREACH AND SERVICE UW Robotics Lab Outreach Coordinator 202 UAW 4121 Cohort Liaison 2023–20 UW U-PASS Student Advisory Board Member | | 2023– |
| Spearheaded training deep learning models on real-world production data and training 3D neural networks. Software Engineer Intern, UiPath 20 Pushed over 30 Git commits to production on Insights team. Worked with Snowflake/SQL, Kubernetes, and Dock PROFESSIONAL SERVICE Conference Reviewer IEEE International Conference on Robotics and Automation (ICRA) 20 Conference on Robot Learning (CoRL) 20 Computer Vision and Pattern Recognition Conference (CVPR) 20 UW CSE PhD Admissions Reviewer 20 OUTREACH AND SERVICE UW Robotics Lab Outreach Coordinator 20 UAW 4121 Cohort Liaison 2023–20 UW U-PASS Student Advisory Board Member 2023–20 | · · · · · · · · · · · · · · · · · · · | 2020–2023 orld robotic control. |
| Pushed over 30 Git commits to production on Insights team. Worked with Snowflake/SQL, Kubernetes, and Dock PROFESSIONAL SERVICE Conference Reviewer IEEE International Conference on Robotics and Automation (ICRA) Conference on Robot Learning (CoRL) Computer Vision and Pattern Recognition Conference (CVPR) 20 UW CSE PhD Admissions Reviewer 20 OUTREACH AND SERVICE UW Robotics Lab Outreach Coordinator 20 UAW 4121 Cohort Liaison 2023-20 UW U-PASS Student Advisory Board Member | | 2022 al networks. |
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| Conference on Robot Learning (CoRL) Computer Vision and Pattern Recognition Conference (CVPR) UW CSE PhD Admissions Reviewer OUTREACH AND SERVICE UW Robotics Lab Outreach Coordinator UAW 4121 Cohort Liaison UW U-PASS Student Advisory Board Member 2023–20 | Conference Reviewer | |
| Computer Vision and Pattern Recognition Conference (CVPR) UW CSE PhD Admissions Reviewer 20 OUTREACH AND SERVICE UW Robotics Lab Outreach Coordinator UAW 4121 Cohort Liaison UW U-PASS Student Advisory Board Member 20 2023-20 2023-20 | | 2025 |
| UW CSE PhD Admissions Reviewer 20 OUTREACH AND SERVICE UW Robotics Lab Outreach Coordinator 2003–20 UAW 4121 Cohort Liaison 2023–20 UW U-PASS Student Advisory Board Member 2023–20 | | 2024 |
| OUTREACH AND SERVICE UW Robotics Lab Outreach Coordinator UAW 4121 Cohort Liaison UW U-PASS Student Advisory Board Member 2023–20 2023–20 | · | 2024 |
| UW Robotics Lab Outreach Coordinator UAW 4121 Cohort Liaison UW U-PASS Student Advisory Board Member 2023–20 2023–20 | UW CSE PhD Admissions Reviewer | 2024 |
| UAW 4121 Cohort Liaison 2023–20 UW U-PASS Student Advisory Board Member 2023–20 | OUTREACH AND SERVICE | |
| UW U-PASS Student Advisory Board Member 2023–20 | UW Robotics Lab Outreach Coordinator | 2023- |
| · | UAW 4121 Cohort Liaison | 2023 – 2024 |
| Pre-Application Mentorship Service (PAMS) Mentor | UW U-PASS Student Advisory Board Member | 2023 – 2024 |
| | Pre-Application Mentorship Service (PAMS) Mentor | 2023 |