Ashwin Balakrishna

Email: abalakrishna@gmail.com, Website, Google Scholar

BACKGROUND I am excited about data-driven decision making, especially for robotic control. I am currently a Research Scientist at Toyota Research Institute working on building foundation models for general purpose robotic manipulation. I am particularly interested in bridging vision and language foundation models with paradigms for robot learning from experience such as imitation and reinforcement learning.

WORK EXPERIENCE

Toyota Research Institute, Research Scientist — Aug 2023 - Present
Large Behavior Model Team

Nuro, Senior Research Scientist — Aug 2022 - Aug 2023
Machine Learning Research Team

Toyota Research Institute, Research Intern — Sep - Dec 2021
Machine Learning Research Team

SpaceX, Software Engineering Intern (Avionics) — Jun - Sep 2017
Power Electronics Software Team

Intel, Hardware Engineering Intern — Jun - Sep 2016
Power Electronics Hardware Team

EDUCATION

UC Berkeley, Berkeley, CA — Aug 2018 - May 2022
Ph.D. in Computer Science — GPA: 3.97/4.00
Thesis: Scalable Supervision for Safe and Efficient Online Robot Learning

California Institute of Technology, Pasadena, CA — Sep 2014 - Jun 2018
Bachelor of Science in Electrical Engineering — GPA: 3.97/4.00

SELECTED PUBLICATIONS

Alexander Khazatsky, Karl Pertsch, Suraj Nair, **Ashwin Balakrishna**, et al. DROID: A Large-Scale In-The-Wild Robot Manipulation Dataset. *Preprint* 2024.

Siddharth Karamcheti, Suraj Nair, **Ashwin Balakrishna**, Percy Liang, Thomas Kollar, and Dorsa Sadigh. Prismatic VLMs: Investigating the Design Space of Visually-Conditioned Language Models. *Preprint* 2024.

Albert Wilcox, **Ashwin Balakrishna**, Jules Dedieu, Wyame Benslimane, Daniel S. Brown, Ken Goldberg. Monte Carlo Augmented Actor-Critic for Sparse Reward Deep Reinforcement Learning from Suboptimal Demonstrations. *Conference on Neural Information Processing Systems (NeurIPS)* 2022.

Brijen Thananjeyan*, **Ashwin Balakrishna***, Suraj Nair, Michael Luo, Krishnan Srinivasan, Minho Hwang, Joseph E. Gonzalez, Julian Ibarz, Chelsea Finn, Ken Goldberg. Recovery RL: Safe Reinforcement Learning with Learned Recovery Zones. *Robotics and Automation Letters (RA-L) and International Conference on Robotics and Automation (ICRA)* 2021.

AWARDS & HONORS

Qualcomm Innovation Fellowship Finalist — 2021
Timothy B. Campbell Innovation Award (Berkeley EECS) — 2020-2021
Apple AI/ML PhD Fellowship Nomination (Berkeley EECS) — 2020
National Science Foundation Graduate Research Fellowship — 2018-2021