Yilun (Evelyn) Hao

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EDUCATION

Stanford University, Stanford, CA — Sep 2021 - Jun 2023(Expected)
Master of Science (GPA: 4.0/4.0) Major in Computer Science
Core courses: Machine Learning, Decision Making Uncertainty, Safe and Interactive Robotics

University of California, San Diego, La Jolla, CA — Aug 2017 - Jun 2021
Bachelor of Science (GPA: 3.9/4.0) Major in Computer Science Minor in Mathematics
Honors: Provost Honors, Magna Cum Laude

PUBLICATIONS (* denotes equal contribution)

- **Y. Hao***, R. Wang*, Z. Cao, Z. Wang, Y. Cui, D. Sadigh, "Masked Imitation Learning: Discovering Environment-Invariant Modalities in Multimodal Demonstrations", Under review for *IEEE Conference on Robotics and Automation (ICRA)*, 2023
- R. Zhang*, D. Bansal*, **Y. Hao***, A. Hiranaka, J. Gao, C. Wang, R. Martín-Martín, L. Fei-Fei, J. Wu, "A Dual Representation Framework for Robot Learning with Human Guidance", *Proceedings of the 6th Conference on Robot Learning (CoRL)*, 2022
- Z.Wang*, Z. Cao*, **Y. Hao**, D. Sadigh, "Weakly Supervised Correspondence Learning", *IEEE Conference on Robotics and Automation (ICRA)*, 2022
- Z. Cao, **Y. Hao**, M. Li, D. Sadigh "Learning Feasibility to Imitate Demonstrators with Different Dynamics", *Proceedings of the 5th Conference on Robot Learning (CoRL)*, 2021
- J. Morris, **Y. Hao**, S. Gupta, B. Khaleghi, B. Aksanli, T. Rosing, "Stochastic-HD: Leveraging Stochastic Computing on the Hyper-Dimensional Computing Pipeline", *Frontiers in Neuroscience*, 2022
- **Y. Hao**, S. Gupta, J. Morris, B. Khaleghi, B. Aksanli, and T. Rosing, "Stochastic-HD: Leveraging Stochastic Computing on Hyper-Dimensional Computing", *IEEE International Conference on Computer Design (ICCD)*, 2021
- J. Morris, **Y. Hao**, S. Gupta, R. Ramkumar, J. Yu, M. Imani, B. Aksanli, T. Rosing, "Multi-label HD Classification in 3D Flash", *IEEE/IFIP International Conference on VLSI and System-on-Chip (VLSI-SoC)*, 2020. (Invited Paper)
- J. Morris, R. Fernando, **Y. Hao**, M. Imani, B. Aksanli, T. Rosing, "Locality-based Encoder and Model Quantization for Efficient Hyper-Dimensional Computing", *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, 2020

EXPERIENCE

Stanford Vision and Learning Lab (SVL) — Mar 2022 - Current
Research Assistant supervised by Prof. Fei-Fei Li and Prof. Jiajun Wu — Stanford University

- Designed and implemented human-in-the-loop RL and IRL algorithms that incorporate scene graph with human evaluative feedbacks and preferences, which significantly improve both task performance and learning speed

Stanford Intelligent and Interactive Autonomous Systems Group (ILIAD) — Apr 2021 - Current
Research Assistant supervised by Prof. Dorsa Sadigh — Stanford University

- Tackled robotics problems of 1) state over-specification of learning from multi-modality data, 2) learning from suboptimal demonstrations especially infeasible dynamics, and 3) corresponding learning

System Energy Efficiency Lab (SEE Lab) — Apr 2019 - Jun 2021
Research Assistant supervised by Prof. Tajana Rosing — University of California, San Diego

- Designed and implemented machine learning algorithms using Hyperdimensional (HD) Computing to raise both the accuracy and efficiency of single-label & multi-label & image classification problem

Stanford University | Course Assistant in Computer Science Dept. — Jan 2022 - Apr 2021

- Worked as course assistant for 'Principles of Robot Autonomy II'

University of California, San Diego | Tutor in Computer Science Dept. — Jan 2021 - Jun 2021

- Worked as tutor for 'Components and Design Techniques for Digital Systems' and 'Introduction to Machine Learning'

Golf AI | Software Engineer — Jul 2020 – Sep 2020

- Designed and implemented an upgraded User Interface of the GolfAI application using SwiftUI

University of California, San Diego | Grader in Mathematics Dept. — Sep 2018 - Jun 2019

- Graded students' homework in Calculus class

ACADEMIC SERVICES

- **Reviewer:** CoRL 2022, IEEE T-RO
- **Volunteer:** Bay Area Robotics Symposium 2021

SKILLS

- **Programming:** Python, PyTorch, TensorFlow, C/C++, Java, Shell, MATLAB; Swift, Firebase; LaTeX
- **Robotics:** Mujoco, Pybullet, Franka Panda, Sawyer, ROS
- **Algorithms:** Machine Learning, Imitation Learning, Reinforcement Learning, Computer Vision