

HAN QI

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RESEARCH INTERESTS

My research focuses on developing efficient, generalizable, and interpretable machine learning frameworks for robotic perception and decision-making. I believe that structured representations and architectures are essential within robot learning pipelines. By integrating learning-based approaches with structured reasoning, my work aims to advance autonomous systems capable of robust and intelligent interaction with the physical world.

EDUCATION

Harvard University

Aug. 2023—Present

Ph.D. in Computer Science, advised by Prof. Heng Yang

GPA: 3.945/4.0

University of California, Berkeley

Aug. 2019—Dec. 2022

B.A. in Computer Science with Highest Distinction in General Scholarship

GPA: 4.0/4.0

PUBLICATIONS

(*Co-first authors)

- [1] **Qi, Han**, Chen, Changhe, and Yang, Heng, “Compose by focus: Scene graph-based atomic skills,” *In Submission to ICRA 2026*,
- [2] Huang, Wenhui, Chen, Changhe, **Qi, Han**, Lv, Chen, Du, Yilun, and Yang, Heng, “Motvla: A vision-language-action model with unified fast-slow reasoning,” *In Submission to ICLR 2026*,
- [3] **Qi, Han**, Yin, Haocheng, Aris Zhu, Du, Yilun, and Yang, Heng, “Strengthening generative robot policies through predictive world modeling,” in *Preprint*, ([pdf](#)), ([web](#)), 2025.
- [4] **Qi, Han***, Yin, Haocheng*, and Yang, Heng, “Control-oriented clustering of visual latent representation,” in *International Conference on Learning Representations (ICLR)*, ([pdf](#)), ([web](#)), [Spotlight](#), 2025.
- [5] Gao, Yihuai, Tang, Yukai, **Qi, Han**, and Yang, Heng, “CLOSURE: Fast quantification of pose uncertainty sets,” in *Robotics: Science and Systems (RSS)*, ([pdf](#)), 2024.
- [6] Wang, Frederic*, **Qi, Han***, De Goyeneche, Alfredo, Heckel, Reinhard, Lustig, Michael, and Shimron, Efrat, “K-band: Self-supervised mri reconstruction via stochastic gradient descent over k-space subsets,” in *International Society for Magnetic Resonance in Medicine (ISMRM)*, ([pdf](#)), [Oral presentation](#), 2023.
- [7] **Qi, Han**, Geng, Xinyang, Rando, Stefano, Ohama, Iku, Kumar, Aviral, and Levine, Sergey, “Latent conservative objective models for data-driven crystal structure prediction,” *arXiv preprint arXiv:2310.10056*, 2023.

- [8] Du, Xuezhi*, **Qi, Han***, Ji, Wenbin, *et al.*, “Construction of a colorectal cancer prognostic risk model and screening of prognostic risk genes using machine-learning algorithms,” *Computational and Mathematical Methods in Medicine*, 2022, ([pdf](#)).
- [9] **Qi, Han***, Su, Yi*, Kumar, Aviral*, and Levine, Sergey, “Data-driven offline decision-making via invariant representation learning,” in *Conference on Neural Information Processing Systems (NeurIPS)*, ([pdf](#)), 2022.

HONORS AND AWARDS

UC Berkeley’s nomination for the CRA Outstanding Undergraduate Researcher Awards 2023
 Term Honor - Dean’s List-College of Letters & Science Fall 2020, Spring 2021
 Intel Science and Engineering Fair (ISEF) finalist and the third-place winner of the AAAI Special Awards in Artificial Intelligence 2018

SERVICES

Harvard University Robotics Students Committee
 Reviewer, Transactions on Machine Learning Research
 Reviewer, NeurIPS 2025
 Reviewer, CoRL 2025

TEACHING EXPERIENCE

Teaching Assistant for ES 158 (Introduction to Optimal Control and Reinforcement Learning), Harvard University Fall 2025
 Teaching Assistant for CS 2281R (Topics in Foundations of ML: Mathematical & Engineering Principles for Training Foundation Models), Harvard University Fall 2024
 Teaching Assistant for CS186 (Introduction to Database Systems), UC Berkeley Fall 2022
 Teaching Assistant for EECS126 (Probability and Random Processes), UC Berkeley Fall 2021
 Reader for EECS126 (Probability and Random Processes), UC Berkeley Spring 2021
 Tutor for CS61A (The Structure and Interpretation of Computer Programs), UC Berkeley Fall 2020, Spring 2021

SKILLS

Tools and Technology	C, C++, Java, Python, SQL, JavaScript, HTML, Swift, Matlab, Pytorch, TensorFlow
Hobby	Figure Skating (Member of Harvard Figure Skating Team)