

# Yi Tian

CONTACT	tianyi.thu@gmail.com	<a href="https://yi-t.github.io">https://yi-t.github.io</a>	Google Scholar	LinkedIn
EDUCATION	<b>Massachusetts Institute of Technology</b> , Cambridge, MA, USA Ph.D. in Electrical Engineering and Computer Science, 2024, <b>Presidential Fellowship</b> Minor in Mathematics Doctoral thesis: <i>Representation Learning for Control: Lessons from Partially Observable Linear Dynamical Systems</i> Thesis committee: Suvrit Sra (advisor), Ali Jadbabaie, Russ Tedrake, John Tsitsiklis M.S. in Electrical Engineering and Computer Science, 2021, GPA: 5.0/5.0 Master's thesis: <i>Online Reinforcement Learning in Factored Markov Decision Processes and Unknown Markov Games</i>			
	<b>Tsinghua University</b> , Beijing, China B.E. in Automation, Jul. 2019, GPA: 3.93/4.0, <b>Top Grade Scholarship (10/3600)</b> Bachelor's thesis: <i>Asynchronous and Distributed Training of Deep Neural Networks</i> <b>Outstanding Graduate Awards</b> , both Tsinghua University and City of Beijing Pre-college: <b>Silver Medal</b> in the 30th Chinese Physics Olympiad (2013)			
SKILLS	GenAI, LLM Agents, Reinforcement Learning/Control, Game Theory, Robotics, Optimization			
CURRENT POSITION	<b>Meta</b> , Bellevue, WA, USA Research Scientist at the Business AI Agent team • Systematic evaluation of real-world AI agents using LLMs as judges • Multi-lingual synthetic data generation for AI agent fine-tuning		Sep. 2024 – Present	
EXPERIENCE	<b>Amazon</b> , Cambridge, MA, USA Applied Scientist Intern at the Robotics AI team • NeRF-based training of dense descriptors for bin manipulation		May. 2022 – Aug. 2022	
	<b>Amazon</b> , Palo Alto, CA, USA Applied Scientist Intern at the Search AI team • Multi-task training of deep-learning-based ranking models		Jun. 2021 – Aug. 2021	
	<b>Massachusetts Institute of Technology</b> , Cambridge, MA, USA Research Assistant with Suvrit Sra, Laboratory for Information and Decision Systems • Provable state representation learning for control (also with Russ Tedrake, Kaiqing Zhang) • Sample-efficient reinforcement learning in Markov decision processes and Markov games	Sep. 2019 – Aug. 2024		
	<b>Massachusetts Institute of Technology</b> , Cambridge, MA, USA Teaching Assistant for <i>Dynamic Programming and Reinforcement Learning</i> by John Tsitsiklis	Jan. 2022 – May 2022		
SELECTED PUBLICATIONS	<b>Yi Tian</b> , Kaiqing Zhang, Russ Tedrake, Suvrit Sra. Cost-Driven Representation Learning for Linear Quadratic Gaussian Control. • Part I: Can Direct Latent Model Learning Solve Linear Quadratic Gaussian Control? <i>5th Annual Learning for Dynamics &amp; Control Conference (L4DC)</i> , 2023. <b>(Oral)</b> • Part II: Toward Understanding State Representation Learning in MuZero: A Case Study in Linear Quadratic Gaussian Control. <i>62nd IEEE Conference on Decision and Control (CDC)</i> , 2023.			
	<b>Yi Tian</b> *, Yuanhao Wang*, Tiancheng Yu*, Suvrit Sra. Online Learning in Unknown Markov Games. <i>38th International Conference on Machine Learning (ICML)</i> , 2021.			
	<b>Yi Tian</b> *, Jian Qian*, Suvrit Sra. Towards Minimax Optimal Reinforcement Learning in Factored Markov Decision Processes. <i>34th Conference on Neural Information Processing Systems (NeurIPS)</i> , 2020. <b>(Spotlight)</b>			
	Yansong Tang*, <b>Yi Tian</b> *, Peiyang Li, Jiwen Lu, Jie Zhou. Deep Progressive Reinforcement Learning for Skeleton-Based Action Recognition. <i>IEEE Conference on Computer Vision and Pattern Recognition (CVPR)</i> , 2018.			