

Carl Qi

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Education

University of Texas at Austin <i>Ph.D. in Electrical & Computer Engineering</i>	August 2023 – Present GPA: 4.0
Carnegie Mellon University <i>M.S. in Machine Learning</i>	August 2021 – December 2022 GPA: 3.96
University of California, Berkeley <i>B.A. in Computer Science, B.A. in Applied Mathematics</i>	August 2017 – August 2021 GPA: 3.976 (Summa Cum Laude)

Research Experience

MIDI Lab, UT Austin <i>Graduate Student Researcher</i>	Austin, Texas August 2023 – Present
<ul style="list-style-type: none">• Work with Prof. Amy Zhang on improving generalization of reinforcement learning algorithms• First authored multiple papers in major conferences including ICLR and ICRA	
The Robotics Institute, Carnegie Mellon University <i>Graduate Student Researcher</i>	Pittsburgh, PA August 2021 – June 2023
<ul style="list-style-type: none">• Work with Prof. David Held on computer vision and machine learning for robotic manipulation• Conduct research on policy training and long horizon reasoning for deformable object manipulation• First authored multiple papers in major conferences and got media coverage in the Washington Post	
Berkeley Artificial Intelligence Research (BAIR) <i>Undergraduate Student Researcher</i>	Berkeley, CA April 2020 – April 2021
<ul style="list-style-type: none">• Worked with Prof. Pieter Abbeel and Prof. Aditya Grover on robust imitation learning• Designed and implemented all experiments that improved existing SOTA performance by 35%	

Industry Experience

UC Berkeley Electrical Engineering and Computer Science (EECS) <i>Instructor CS188 – Intro to AI</i>	Berkeley, CA June 2021 – August 2021
<ul style="list-style-type: none">• Gave 25 lectures on fundamental AI techniques such as reinforcement learning to 250+ students• Recruited and led 20 staff members to develop course materials: 2 exams, 5 projects and 10 homework• Invented policies that facilitated remote learning to accommodate students from 6 different time zones	
Goldman Sachs <i>Quantitative Strategist Intern</i>	New York City, NY July 2020 – August 2020
<ul style="list-style-type: none">• Undertook backend development in a digital storefront that delivers cross-asset access to global markets• Developed 2 production-level endpoints that allowed investors to assess risk profile in various scenarios• Integrated the endpoints with an open-source Python library that resulted in 100+ client visits per day	

Publications & Preprints

- [1] Carl Qi, Dan Haramarti, Tal Daniel, Aviv Tamar, and Amy Zhang. “EC-Diffuser: Multi-Object Manipulation via Entity-Centric Behavior Generation”. In: *Preprint*. 2024. URL: <https://openreview.net/forum?id=o3pJU5QCtv>.
- [2] Carl Qi, Yilin Wu, Lifan Yu, Haoyue Liu, Bowen Jiang, Xingyu Lin, and David Held. “Learning generalizable tool-use skills through trajectory generation”. In: *arXiv preprint arXiv:2310.00156* (2023).
- [3] Xingyu Lin*, Carl Qi*, Yunchu Zhang, Yunzhu Li, Zhiao Huang, Katerina Fragkiadaki, Chuang Gan, and David Held. “Planning with Spatial-Temporal Abstraction from Point Clouds for Deformable Object Manipulation”. In: *6th Annual Conference on Robot Learning*. 2022. URL: <https://openreview.net/forum?id=tyxyBj2w4vw>.
- [4] Carl Qi, Xingyu Lin, and David Held. “Learning Closed-Loop Dough Manipulation Using a Differentiable Reset Module”. In: *IEEE Robotics and Automation Letters* 7.4 (2022), pages 9857–9864. DOI: 10.1109/LRA.2022.3191239.

Awards & Honors

Qualcomm Innovation Fellowship Finalist <i>Qualcomm</i>	2023
2nd Place Winner of East Coast Regional Datathon <i>Citadel Securities</i>	2021
2nd Place Winner in Cisco EN Hackathon <i>Cisco</i>	2019
2nd Place Winner in Sodahacks <i>University of California, Berkeley</i>	2018
1st Prize in Beijing High School Mechanics Contest <i>Chinese Society of Physics</i>	2015

Teaching

10-418/618: ML for Structured Data <i>TA</i>	Carnegie Mellon University Spring 2022
10-725: Convex Optimization <i>TA</i>	Carnegie Mellon University Fall 2021
CS188: Artificial Intelligence <i>Instructor</i>	Univeristy of California, Berkeley Summer 2021
CS188: Artificial Intelligence <i>TA</i>	Univeristy of California, Berkeley Spring 2021
CS188: Artificial Intelligence <i>TA</i>	Univeristy of California, Berkeley Fall 2020
CS188: Artificial Intelligence <i>TA</i>	Univeristy of California, Berkeley Spring 2020
CS188: Artificial Intelligence <i>TA</i>	Univeristy of California, Berkeley Fall 2019