

# Carl Qi

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## Education

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

## Research Experience

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

## Industry Experience

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

## Publications & Preprints

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- [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

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

## Teaching

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