Carl Qi

4500 Centre Ave
Pittsburgh, PA, 15213

Website: https://carl-qi.github.io
Email: hanwenq@andrew.cmu.edu

Education

Carnegie Mellon University — August 2021 – December 2022
M.S. in Machine Learning — **GPA: 3.96**

University of California, Berkeley — August 2017 – August 2021
B.A. in Computer Science, B.A. in Applied Mathematics — **GPA: 3.976 (Summa Cum Laude)**

Research Experience

The Robotics Institute, Carnegie Mellon University — Pittsburgh, PA
Graduate Student Researcher — **August 2021 – Present**

- 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) — Berkeley, PA
Undergraduate Student Researcher — **April 2020 – April 2021**

- 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) — Berkeley, CA
Instructor | CS188 – Intro to AI — **June 2021 – August 2021**

- 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 — New York City, NY
Quantitative Strategist Intern — **July 2019 – August 2019**

- 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] 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.

[2] Carl Qi, Pieter Abbeel, and Aditya Grover. "Imitating, Fast and Slow: Robust learning from demonstrations via decision-time planning". In: *arXiv preprint arXiv:2204.03597* (2022).

[3] 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

2nd Place Winner of East Coast Regional Datathon — **2021**
Citadel Securities

2nd Place Winner in Cisco EN Hackathon — **2019**
Cisco

2nd Place Winner in Sodahacks — **2018**
University of California, Berkeley

1st Prize in Beijing High School Mechanics Contest — **2015**
Chinese Society of Physics

Teaching

10-418/618: ML for Structured Data — Carnegie Mellon University
TA — **Spring 2022**

10-725: Convex Optimization — Carnegie Mellon University
TA — **Fall 2021**

CS188: Artificial Intelligence — Univeristy of California, Berkeley
Instructor — **Summer 2021**

CS188: Artificial Intelligence — Univeristy of California, Berkeley
TA — **Spring 2021**

CS188: Artificial Intelligence — Univeristy of California, Berkeley
TA — **Fall 2020**

CS188: Artificial Intelligence — Univeristy of California, Berkeley
TA — **Spring 2020**

CS188: Artificial Intelligence — Univeristy of California, Berkeley
TA — **Fall 2019**