Carl Qi

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EDUCATION

Carnegie Mellon University — Expected Graduation: Dec 2022
M.S. Machine Learning, *School of Computer Science* — **GPA: 3.89**

University of California, Berkeley — Aug 2021
B.A. Computer Science, *College of Letters & Science* — **GPA: 3.976 (Summa Cum Laude)**
B.A. Applied Mathematics, *College of Letters & Science*

Relevant Coursework

Advanced Deep Learning (A)
Convex Optimization (A)
Efficient Algorithms and Intractable Problems (A)
Deep Reinforcement Learning (A+)
Natural Language Processing (A)
Discrete Mathematics and Probability (A+)

PROFESSIONAL EXPERIENCES

The Robotics Institute, Carnegie Mellon University — **Pittsburgh, PA**
Researcher | Robots Perceiving and Doing Lab — Aug 2021-Present

- Work with Prof. David Held on applying machine learning and computer vision to robotic manipulation tasks
- Conduct research on dough manipulation that involves training point cloud-based policies and long horizon planning
- First authored 2 papers in major robotics conferences (see projects) and got media coverage in the *Washington Post*

UC Berkeley Electrical Engineering and Computer Science (EECS) — **Berkeley, CA**
Instructor | CS188 - Intro to Artificial Intelligence — June 2021-Aug 2021

- Gave 25 lectures on fundamental AI techniques such as reinforcement learning and games to a class of 250+ students
- Recruited and led 20 staff members to develop course materials including 2 exams, 5 projects, and 10 homeworks
- Invented new course policies that facilitated remote learning and accommodated students from 6 different time zones

Berkeley Artificial Intelligence Research (BAIR) — **Berkeley, CA**
Undergraduate Researcher | Robot Learning Lab — Apr 2020-Apr 2021

- Worked alongside Prof. Pieter Abbeel and Prof. Aditya Grover on improving the robustness of imitation learning
- Designed, implemented, and executed all experiments that resulted in improvements on SOTA performance by 35%
- Became the first author of a paper that is submitted to major conferences including ICML for peer review

Goldman Sachs — **New York City, NY**
Quantitative Strategist Intern — July 2020-Aug 2020

- Took charge in backend development in Marquee, a digital storefront that delivers cross-asset access to global markets
- Developed 2 production-level endpoints that allowed investors to assess their risk profile in various scenarios via GUI
- Integrated the created endpoints with an open-source Python pricing library that resulted in 100+ client visits per day

PROJECTS

PASTA | Python, PyTorch, ROS | https://sites.google.com/view/pasta-plan — June 2022

- A project that uses spatial and temporal abstractions to compose skills (cut, push, spread) for dough manipulation, **accepted to Conference on Robot Learning (CoRL), 2022**

Differentiable Reset Module | Python, PyTorch, ROS | https://sites.google.com/view/dough-manipulation — Dec 2021

- A project that leverages a differentiable reset module to train a point cloud-based policy for dough manipulation, **accepted to IEEE Robotics and Automation Letters (RA-L), 2022**

Pintos – UC Berkeley | C, Linux — Jan 2020

- An operating system that supports kernel threads, loading and running user programs, scheduling, and a file system

SKILLS

Languages: Python, Java, C, JavaScript, R, Go, RISC-V, Shell
Frameworks & Tools: PyTorch, TensorFlow, ROS, Flask, React, Django, Selenium, Robot Framework, SQL