# Lawrence Chen

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## Education

**Carnegie Mellon University**

**5th Year Research Master's in Computer Science | Expected 4.0 GPA** **2023.06 - Present**

- Researching automated stroke discovery techniques for robotic painting (FRIDA).
- Coursework: Advanced and Distributed Operating Systems, Deep Reinforcement Learning

**B.S. in Computer Science | 3.88 GPA** **2019.08 - 2023.05**

- Concentration in Computer Graphics, Minor in Mathematics
- Coursework: Operating Systems, Parallel Computer Architecture and Programming, Computer Game Programming, Introduction to Deep Learning, Physics Based Rendering

## Experience

**Carnegie Mellon University** **2023.06 - Present**
Research Assistant Pittsburgh

- Developed autoencoder-based stroke generation algorithm used in robotic painting methods.

**Jump Trading** **2022.06 - 2022.08**
Quantitative Researcher Intern Chicago & New York

- Explored various database designs for market data storage and analyzed their compression ratios and throughput.
- Designed, implemented, and evaluated algorithms for fast order execution in C++.

**Carnegie Mellon University** **2022.01 - 2022.05**
Teaching Assistant Pittsburgh

- Led recitations and graded for 15-451 (Advanced Data Structures & Algorithms)

**Facebook AI** **2021.05 - 2021.08**
Software Engineer Intern Remote

- Worked on the Habitat project, a photorealistic simulation environment for training AI agents. Optimized a webapp that allows the user to spawn, grab, and move around objects in a VR headset, with the goal of collecting human data. Used Javascript Web Workers to move rendering to a separate thread, increasing worst-case frames per second from 30 to 120.

**Google** **2020.05 - 2020.08**
STEP Intern Remote

- Collaborated with pod-mates to create a website called Street Explorer that allowed users to make and solve custom scavenger hunts on Google Maps.

## Awards and Achievements

**International Collegiate Programming Contest (ICPC)**

- Represented CMU in a team of 3, placing 12th at the North America Championship and qualifying for world finals.

**MIT Battlecode**

- Competed against hundreds of teams in AI-controlled real-time strategy games.
- 1x champion, 4x top-3, 5x finalist.

**Google Code Jam**

- Round 3 qualifier (ranked 72nd US out of ~1500).

## Skills

Languages: C/C++, Python, Rust, Java
Technologies: PyTorch, OpenGL, CUDA, OpenMP