

Justin Zhang

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EDUCATION

Carnegie Mellon University

MS in Computer Science (Thesis)
GPA: 4.0 Thesis: Secure Convertible Codes

Pittsburgh, PA
May 2023 – May 2024

Carnegie Mellon University

BS in Computer Science, Concentration in Algorithms, Minor in Math
GPA: 3.78, University Honors

Pittsburgh, PA
Aug. 2019 – May 2023

PRESENTATIONS

CMU Undergrad Theory Group

Carnegie Mellon University
"Coding Theory and Applications to Storage Systems"

Pittsburgh, PA
May 2023

Meeting of the Minds Research Symposium

Carnegie Mellon University
"Matrix Approximations for Recommender Systems on TPUs"

Pittsburgh, PA
May 2022

WORK EXPERIENCE

Software Development Intern

Amazon
• Interning in the STORES Organization.

May 2024 – August 2024
Seattle, WA

SCS Research Assistant (TheSys Lab)

Carnegie Mellon University
• Mentored by Rashmi Vinayak on research in the intersection of coding theory and distributed storage systems.
• Developed information-theoretic secure convertible code constructions and bounds.

Jan 2022 – Aug 2024
Pittsburgh, PA

Software Engineering Intern

Goldman Sachs
• Deployed an end-to-end distributed streaming computation pipeline with Apache Flink, Kafka, and Kubernetes.
• Dramatically improved the processing of firmwide permission events hundred-fold to near real time.

June 2022 – August 2022
New York City, NY

Volunteer Assistant Director of Classes

UEAA Fun Fun Saturday
• Mentored a team of 12 volunteers to maintain the day-to-day quality of our program's classes.
• Interviewed and collaborated with over 15 instructors to have a diverse class catalog for more than 200 students.

May 2016 – August 2022
New York City, NY

Python Programmer

GPN Lab @ UPMC
• Solely developed a sophisticated pacman-like game application with Pygame and PyInstaller.
• Implemented logging mechanisms to calculate optimal player movement for future data analysis.

July. 2021 – June 2022
Pittsburgh, PA

TEACHING EXPERIENCE

15-151 Mathematical Foundations for Computer Science (S24)

- *Tutored* a student biweekly for 3 hours a week. Hired by the university as an official course tutor.
- Extensively built tutee's intuition through carefully guided examples and material review.

21-301 Combinatorics (S23), 21-373 Algebraic Structures (F23)

- Held weekly office hours and consistently answered questions on Piazza.
- Responsible for grading weekly homeworks and exams.

15-150 Functional Programming (S21,M21,F21,S22,S23)

- Led two weekly recitations of twenty students reviewing course topics and held biweekly office hours.
- Created new homework problems and recitation lesson plans through at least twenty content development teams.

AWARDS

Presidential Doctoral Excellence Award (2024, Purdue)

Nominated by the Purdue Computer Science department for outstanding scholarly potential. Support for four years.

The Tepper Scholarship (2022-2023, CMU)

Selected as a recipient for high achieving academic performance. Semesters received: S22,F22,S23

UEAA Scholarship (2021)

Scholarship for academic and personal achievement while dedicating time and effort to serve the Chinatown community.