Justin Zhang

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Education

Purdue University — West Lafayette, IN
PhD in Computer Science — *Aug 2024 – May 2028*

Carnegie Mellon University — Pittsburgh, PA
MS in Computer Science (Thesis) — *May 2023 – May 2024*
GPA: 4.0 Thesis: Secure Convertible Codes

Carnegie Mellon University — Pittsburgh, PA
BS in Computer Science, Concentration in Algorithms, Minor in Math — *Aug 2019 – May 2023*
GPA: 3.78, University Honors

Volunteer Experience

Volunteer Assistant Director of Classes — May 2016 – August 2022
UEAA Fun Fun Saturday — *New York City, NY*

- Assisted, taught, and administered volunteer-run classes for first-generation Asian American youth.
- Collaborated with over 15 instructors to have a diverse class catalog for more than 200 students.
- Mentored a team of 12 volunteers to maintain the day-to-day quality of our program's classes.

Work Experience

Software Development Intern — May 2024 – August 2024
Amazon — *Seattle, WA*

- Successfully deployed an API migration of an integral component of the cross-borders Amazon fulfillment process.
- Gained expertise in the model-first service development, A/B shadow testing, and pipeline management.

SCS Research Assistant (TheSys Lab) — Jan 2022 – Aug 2024
Carnegie Mellon University — *Pittsburgh, PA*

- 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.

Software Engineering Intern — June 2022 – August 2022
Goldman Sachs — *New York City, NY*

- 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.

Python Programmer — July. 2021 – June 2022
GPN Lab @ UPMC — *Pittsburgh, PA*

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

Teaching Experience (Purdue)

CS251 Data Structures and Algorithms (F24)

- Teaching a weekly problem solving session to improve student's algorithms understanding.

Teaching Experience (CMU)

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 Scolarship (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.