

ERICA CHIANG

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EDUCATION

Cornell University Ph.D. student in Computer Science	Aug 2023 - Present
Carnegie Mellon University B.S. in Computer Science, Minor in Human-Computer Interaction Cumulative GPA: 3.95 / 4.0 Phi Beta Kappa, University Honors, School of Computer Science College Honors	Aug 2019 - May 2023

AWARDS

NSF Graduate Research Fellowship	2023
Phi Beta Kappa	2023
Carnegie Mellon Senior Leadership Recognition Award	2023
Andrew Carnegie Society Scholar 40 out of 2000 students selected for academic excellence and leadership	2023
Undergraduate Student Research Competition 2nd Place, ACM SIGCOMM	2022
Selected for Cornell, Maryland, Max Planck Pre-Doctoral Research School	2022
Johns Hopkins Applied Physics Laboratory Positive Influence Award 1 out of 200 interns selected for exceptional performance and leadership	2022

PAPERS

- Learning Disease Progression Models That Capture Health Disparities**
Erica Chiang, Divya Shanmugam, Ashley Beecy, Gabriel Sayer, Deborah Estrin, Nikhil Garg, Emma Pierson
Structured Probabilistic Inference & Generative Modeling Workshop @ ICML, 2024 (SPIGM 24)
Machine Learning for Health Symposium, 2024 (ML4H 24)
- SurgeProtector: Mitigating Temporal Algorithmic Complexity Attacks using Adversarial Scheduling**
Nirav Atre, Hugo Sadok, Erica Chiang, Weina Wang, and Justine Sherry
ACM Special Interest Group on Data Communication, 2022 (SIGCOMM 22)

SELECTED POSTERS

- Robust Heuristics: Attacks and Defenses on Job Size Estimation for WSJF Systems**
Erica Chiang, Nirav Atre, Hugo Sadok, Weina Wang, and Justine Sherry
ACM SIGCOMM Poster Session, 2022
🏆 Runner-up of the ACM SIGCOMM '22 Undergraduate Student Research Competition

WORK EXPERIENCE

Johns Hopkins Applied Physics Laboratory , Computer Science Intern	Summer 2021
<i>Contributed to 2 projects. (1) Chief Digital and Artificial Intelligence Office aircraft readiness model: testing, evaluation, and benchmark model development; (2) Airborne Collision Avoidance System (ACAS): designed and deployed a full stack web application for use in the development of ACAS software.</i>	
NASA Jet Propulsion Laboratory , Software Engineer Intern	Summer 2021
<i>Developed software to monitor telemetry data traveling through NASA Deep Space Network and created an interactive webpage for visualizing and accessing the data in real time, intended for real world use on vehicles such as NASA Mars Perseverance Rover.</i>	

PREVIOUS RESEARCH EXPERIENCE

- Characterizing Social Media Narratives**, CMU CASOS Lab Sept 2022 - May 2023
Senior Thesis Project, Advised by Prof. Kathleen Carley
Analyzed Twitter data to identify patterns in the linguistic and psychological cues that different actors tend to use, in order to understand how this shapes their influence over online communities
- Adversarial Job Scheduling in Network Functions**, CMU SNAP Lab Jan 2021 - Aug 2022
Advised by Profs. Justine Sherry and Weina Wang
Studied packet-scheduling algorithms that mitigate the damage of algorithmic complexity attacks (ACA) and led a project to explore the theoretical implications of using heuristics for packet job size estimation
- Bias in ML Algorithms**, CMU CHIMPS Lab Aug 2020 - Dec 2020
Advised by Jason Hong, Motahhare Eslami, Ken Holstein, Hong Shen
Developed research questions and interview protocols to study how people search for, identify, and respond to bias in machine learning algorithms, with the goal of creating a crowd audit platform

TEACHING EXPERIENCE

- Data Science in the Wild** (CS 5304 @ Cornell Tech), Teaching Assistant Spring 2025
- Mathematical Foundations for Computer Science** (15-151/21-128 @ CMU), Teaching Assistant Fall 2021
Taught two recitation sections per week, held weekly Office Hours, designed exercises, prepared & taught exam review sessions (to 200 students each time)

MENTORING & SERVICE

- Reviewer**, ACM Web Conference 2025
- Mentor**, Cornell PhD Application Support Program Fall 2024
- Mentor**, Cornell PhD Application Support Program Fall 2023
- Mentor**, CMU Society of Women Engineers & SCS Mentorship Programs Sept 2022 - May 2023
- Orientation Counselor**, CMU First-Year Orientation Aug 2021
Mentored 20 freshmen during their transition to college and throughout their first year at CMU, facilitated discussions about diversity, inclusivity, well-being, and identity

EXTRACURRICULAR INVOLVEMENTS

- CMU C# Choir** 2019 - 2023
President (2021-22)
Vice President Internal (2020-21)
Design Chair (2019-20, 2022-23)
- CMU Sweepstakes ("Buggy")** 2019 - 2023
Women's Push Captain (2022-23): *Recruit and lead team of runners to compete in annual Spring Carnival*
- CMU Taiwanese Students Association** 2019 - 2023
Secretary (2021-22)
Freshman Representative (2019-20)
- CMU Club Soccer Team & Lake Oswego High School Varsity Soccer** 2015 - 2021
- Lake Oswego High School Student Government** 2018 - 2019
Student Body Vice-President (2018-19)
- Lake Oswego High School Varsity & Club Track and Field** 2015 - 2019
Team Captain (2019)
Oregon Class 6A (largest division) All-State First Team x2
High school record holder

Physics Lab Educator, Oregon Museum of Science & Industry

Oct 2016 - Jul 2019

Developed new lab demonstrations and experiments for museum visitors, worked with children to teach physics concepts through visual and interactive activities

SKILLS

Art and Design: ericchiang.wixsite.com/website-1

National Scholastic Art Awards 2019: 1 Gold Key, 2 Silver Keys