ERICA CHIANG

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EDUCATION

Cornell University Aug 2023 - present
Ph.D. student in Computer Science

Carnegie Mellon University Aug 2019 - May 2023
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

AWARDS

Best Paper Award, CHIL 2025

Digital Life Initiative Doctoral Fellowship 2025

Siegel PiTech PhD Impact Fellowship 2025

NSF Graduate Research Fellowship 2023

Phi Beta Kappa 2023

Carnegie Mellon Senior Leadership Recognition Award 2023

Andrew Carnegie Society Scholar 2023
40 out of 2000 students selected for academic excellence and leadership

Undergraduate Student Research Competition 2nd Place, ACM SIGCOMM 2022

Johns Hopkins Applied Physics Laboratory Positive Influence Award 2022
1 out of 200 interns selected for exceptional performance and leadership

PUBLICATIONS

1. **Learning Disease Progression Models That Capture Health Disparities**
   Erica Chiang, Divya Shanmugam, Ashley Beecy, Gabriel Sayer, Deborah Estrin, Nikhil Garg, Emma Pierson
   *Conference on Health, Inference, and Learning, 2025 (**CHIL 25**)*
   *Machine Learning for Health Symposium, 2024 (**ML4H 24**)*
   *ICML Workshop on Structured Probabilistic Inference and Generative Modeling, 2024 (**SPIGM 24**)*
   Best Paper Award at CHIL 2025

2. **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 TALKS

1. **Personalized Recommendations without Inducing Congestion: Mitigating Disparities in the NYC High School Match**
   - *Cornell Tech Digital Life Initiative Seminar, Spring 2026*
   - *Guest lecture, Applied Data Science (ORIE 5355) @ Cornell Tech, Fall 2025*
   - *Institute for Operations Research and the Management Sciences, 2025 (**INFORMS 25**)*

SELECTED POSTERS

1. **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 2022 Undergraduate Student Research Competition

Work Experience

Johns Hopkins Applied Physics Laboratory, Computer Science Intern — Summer 2022

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.

NASA Jet Propulsion Laboratory, Software Engineer Intern — Summer 2021

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.

Previous Research Experience

Characterizing Social Media Narratives, CMU CASOS Lab — Sept 2022 - May 2023

Senior Thesis Project, Advised by 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 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

PiTech Impact Studio (TECH 5930 @ Cornell Tech), Teaching Assistant — Spring 2026

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

Social Chair, PhDs at Cornell Tech — 2025 - 2026

Visit Day Czar, Cornell CS Department — 2025

Reviewer, ACM Web Conference — 2025

Mentor, Cornell CS PhD Application Support Program — Fall 2023, Fall 2024

Mentor, CMU Society of Women Engineers & SCS Mentorship Programs — 2022 - 2023

Orientation Counselor, CMU First-Year Orientation — 2021

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 2016 - 2019
Developed new lab demonstrations and experiments for museum visitors, worked with children to teach physics concepts through visual and interactive activities

SKILLS

Languages: C, Python, Java, HTML, JavaScript, CSS, MATLAB
Art and Design: ericachiang.wixsite.com/website-1
National Scholastic Art Awards 2019: 1 Gold Key, 2 Silver Keys