

Emily Chang

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Education

University of Virginia (UVA), School of Engineering and Applied Science, GPA: 3.99 May 2025

Bachelor of Science in Computer Science, Minor in Applied Mathematics, Cybersecurity Focal Path

- Winner of the Burris Scholarship (a \$15k leadership award) and the Virginia Space Grant Consortium Undergraduate Research Scholarship
- Capital One Summer 2024 Software Engineer intern in McLean, Virginia

Skills

Languages Assembly x86-64, C, Java, Javascript, MATLAB, PHP, Python, R, SQL, English, Latin, Mandarin

Tools Git, JavaFX, JUnit, Metasploit, Nmap, Rivanna supercomputer, SLURM, Tensorflow, Unix, Wireshark

Research Experience

NATIONAL SCIENCE FOUNDATION, NATURAL LANGUAGE PROCESSING INTERN May 2023 - Aug 2023

- Built machine learning models in Python to assess whether the NSF met the goals set out in the CHIPS and Science Act
- Produced a machine learning model that provided policy analysis 20% more accurate than ChatGPT

CARNEGIE MELLON UNIVERSITY'S RESEARCH EXPERIENCE FOR UNDERGRADUATES IN

SOFTWARE ENGINEERING, CYBERSECURITY INTERN

May 2022 - Aug 2023

- Formulated data-driven solutions that could make cybersecurity more inclusive for women and expand Internet access in rural communities
- Proposed recommendations to the National Security Agency and Egypt's Board of Education
- Published [Broadband Expansion: Disseminating Policy Lessons on COVID-19](#) in the *United Nations' Forum on Science, Technology, and Innovation*
- Published [Investigating the Experiences of Female CTF Players](#) at the *Workshop on Security Information Workers*

HARVARD COLLEGE'S CORONAVIRUS VISUALIZATION TEAM, PROJECT LEAD

Mar 2020 - Jun 2021

- Led an international team of 15 high school and college students in recommending global environmental regulations
- Published [Association of temporary Environmental Protection Agency regulation suspension with industrial economic viability and local air quality in California, United States](#) in *Environmental Sciences Europe*
- Published [An Environmental Data Collection for COVID-19 Pandemic Research](#) in *Data*

Software Engineering Experience

UX/UI DESIGNER OF EXPLOREXP

Feb 2024

- Won Best Connection/Connectivity Hack at the University of Virginia's Hack the Map competition
- Constructed a Django-based web app that gamified the travel experience and hand-drew the UX/UI animation

TESTING MANAGER OF UVA TRANSFER GUIDE

Jan 2023 - May 2023

- Made a Django-based app where students and faculty can search for courses transferable to UVA
- Directed alpha- and beta-testing, performed requirements elicitation, and developed user interface

Leadership Experience

UVA HOUSING AND RESIDENCE LIFE, RESIDENT ADVISOR AND CAMPUS SECURITY AUTHORITY

Jan 2023 - Present

- Created programs emphasizing community engagement, diversity, and career development for over 102 students

UVA APPLIED MATHEMATICS AND COMPUTER SCIENCE DEPARTMENT, TEACHING ASSISTANT

Jan 2022 - Present

- Mentored 135 Probability students by debugging MATLAB code and providing feedback on assignments
- Held office hours for Discrete Math Theory 2—a class of 291 students—as well as assisted with grading exams and homework

STATE DEPARTMENT'S TECHGIRLS PROGRAM, STUDENT AMBASSADOR AND COURSE FOUNDER

Jun 2019 - Present

- Engineered video games in Java, managed Unix operating systems, and promoted cultural education
- Designed a course on combating COVID-19 misinformation with data science and taught girls hailing from 13 countries