

Emily Chang

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Education

University of Virginia (UVA), School of Engineering and Applied Science, GPA: 3.98

May 2025

Bachelor of Science in Computer Science and Minor in Applied Mathematics

Winner of the Burris Scholarship (a \$15k leadership award) and the Virginia Space Grant Consortium

Undergraduate Research Scholarship

Skills

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

Frameworks JUnit, JavaFX, Git, Django, Unix, Tableau, Google Tensorflow, QGIS, ArcGIS, Microsoft Power BI, Streamlit

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

May 2022 - August 2022

SOFTWARE ENGINEERING, CYBERSECURITY INTERN

- 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 *United Nation's Forum on Science, Technology, and Innovation*
- Published [Investigating the Experiences of Female CTF Players](#) at *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

TESTING MANAGER OF UVA TRANSFER GUIDE

Jan 2023 - May 2023

- Practiced agile development in designing a Django-based app that allows students and faculty to search for courses transferable to UVA
- Directed alpha and beta-testing, interviewed university faculty as part of requirements elicitation, and developed user interface

CO-FOUNDER OF MINERVA'S LIST

Jun 2019 - Present

- Developed a Javascript database where students can find scholarships that fit their academic and financial needs

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 65 students

UVA APPLIED MATHEMATICS DEPARTMENT, TEACHING ASSISTANT

Jan 2022 - May 2023

- Graded assignments and advised Probability (APMA 3100) professors on student understanding
- Mentored 135 students one-on-one with lecture material and debugged MATLAB code

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