Lena Armstrong

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EDUCATION

Harvard University, Cambridge, MA 2024 - Present
Doctor of Philosophy in Computer Science (Advised by Fernanda Viégas and Martin Wattenberg)

University of Pennsylvania, Philadelphia, PA 2019 - 2023
Bachelor of Arts in Computer Science & Cognitive Science (Graduated *summa cum laude*)
Minor in Sustainability & Environmental Management

HONORS, AWARDS, & FELLOWSHIPS

- National Science Foundation Graduate Research Fellowship (NSF GRFP) 2024
- Computer Science Academic Award 2023
- College Alumni Society Prize for Research in Cognitive Science 2023
- Phi Beta Kappa 2023
- Max Mintz Undergraduate TA Hall of Fame 2023
- Penn Engineering Sustainability Challenge Finalist 2020

PUBLICATIONS

Lena Armstrong and Danaë Metaxa. "Navigating Automated Hiring: Fairness Perceptions, Strategy Use, and Outcomes Among Young Job Seekers." (*accepted to CSCW 2025*)

Jean Salac, **Lena Armstrong**, Megumi Kivuva, Jayne Everson, and Amy J. Ko. "How Economically Marginalized Adolescents of Color Negotiate Critical Pedagogy in a Computing Classroom." TOCE 2024.

Lena Armstrong, Abbey Liu, Stephen MacNeil, and Danaë Metaxa. "The Silicon Ceiling: Auditing GPT's Race and Gender Biases in Hiring." EAAMO 2024.

Lena Armstrong, Jayne Everson, and Amy J. Ko. "Navigating a Black Box: Students' Experiences and Perceptions of Automated Hiring." ICER 2023.

Jean Salac, Alannah Oleson, **Lena Armstrong**, Audrey Le Meur, and Amy J. Ko. "Funds of Knowledge used by Adolescents of Color in Scaffolded Sensemaking around Algorithmic Fairness." ICER 2023. **[BEST PAPER]**

RESEARCH & PROFESSIONAL EXPERIENCE

Research Assistant, Insight & Interaction Lab, Harvard University, Cambridge, MA Aug 2024 – Present
- Researching human-AI interaction and algorithmic justice with Dr. Fernanda Viégas and Dr. Martin Wattenberg
- Working to bridge humans and technology for social impact and understand bias and opacity in AI-based systems

Research Assistant, Penn HCI Lab, University of Pennsylvania, Philadelphia, PA Aug 2022 – July 2024
- Designed study for senior honors thesis with Dr. Danaë Metaxa based on previous automated hiring research
- Investigated opacity in automated hiring, how to conduct bias audits of automated hiring systems, and relationships between strategies people use to navigate automated systems and perceptions of algorithmic fairness

Research Assistant, Code & Cognition Lab, University of Washington, Seattle, WA Jun - Aug 2022
- Selected for National Science Foundation (NSF) funded research with Dr. Amy J. Ko; worked on projects related to perceptions of algorithmic fairness and improving computer science education; published two papers
- Taught algorithmic fairness and computer science as part of Upward Bound program for first-generation, low-income high school students, and studied impact of critically conscious computing education
- Researched adolescents' perceptions of algorithmic fairness through responses to different technological scenarios
- Lead and designed additional research project on first-time job seekers' perceptions of automated hiring algorithms

Research Assistant, Human Computer Interaction Institute, Carnegie Mellon University, Pittsburgh, PA Jun - Aug 2021
- Selected for NSF-funded research with Dr. Amy Ogan through HCII Summer Undergraduate Research Program;

worked on chatbot to support hundreds of teachers in low infrastructure contexts in Côte d'Ivoire
- Performed competitive analysis, created prototypes, conducted literature review, created dashboard, and reviewed user interviews of teachers' experiences to improve accessibility and impact of chatbot

Research Assistant, Penn Center for Neuroengineering & Therapeutics, Philadelphia, PA May 2020 – Dec 2021
- Selected as 1 of 150 (out of 800) applicants for Penn Undergraduate Research Mentorship (PURM) Program and performed research on machine learning of EEG to help diagnose epilepsy in summer 2020 with Dr. Kathryn Davis
- Created pipeline to predict functional connectivity from structural connectivity using brain network analysis and machine learning techniques; Presented at weekly lab meetings, journal clubs, and Penn's Annual Research Expo

Project Manager, Animaná & Hecho por Nosotros, Buenos Aires, Argentina May – Oct 2020
- Managed 5-person team designing mobile app to improve transparency and traceability of textile value chains
- Collaborated on education technology platform (HxN toolkit) to improve sustainability of fashion industry
- Served as liaison to United Nations Economic Commission for Europe (UNECE)

TEACHING EXPERIENCE

Coach, Brave Behind Bars Jun - Sep 2024
- Helped teach college-accredited introductory computer science and career-readiness program for incarcerated people
- Provided support for students in small group activities, office hours, and project completion

Head Teaching Assistant, University of Pennsylvania, Philadelphia, PA Aug 2023 – May 2024
- Helped create and grade assignments for Introduction to Human Computer Interaction (CIS 4120/5120) in Fall 2023 and Algorithmic Justice (CIS 700) in Spring 2024
- Lead in-class studios, provided support to 60+ students during office hours, and managed 10 person course staff

Head Teaching Assistant, University of Pennsylvania, Philadelphia, PA Aug 2022 – May 2023
- Contributed to design and grading of homework and exams for Introduction to Computer Science (CIS 1100) and managed 40+ person course staff
- Promoted for my work aiding students' sense of belonging and leading new Teaching Assistant training

Teaching Assistant, University of Pennsylvania, Philadelphia, PA Aug 2020 – May 2022
- Taught weekly recitations and provided support to 300+ students during weekly office hours
- Received a 5/5 course evaluation from students all six semesters I was a Teaching Assistant

LEADERSHIP & SERVICE

President, Women in Computer Science May 2021 – May 2022
- Managed club of over 100 members and 20-person executive board to encourage women in computer science
- Organized career preparation and programming workshops to provide women resources and support
- Conducted survey to determine experiences in computer science and presented results through social media campaign (WICS Percentage Project) and Computer and Information Science Diversity Summit
- Invited to speak on several panels about how to succeed in computer science and advocate for more diversity in CS
- Worked with Penn faculty to improve computer science education by creating venues for student feedback

Co-Director, PennGreen Sep 2020 - Aug 2021
- Organized 5-day orientation program for 50 first-year college students
- Created curriculum focused on sustainability education and outdoor activities (certified in Wilderness First Aid)

Mentor, FemmeHacks Feb 2021
- Helped with project ideation and development for inclusive hackathon to encourage women in computer science
- Held a panel discussion with high school students about how to pursue a computer science degree

SKILLS & INTERESTS

Technical Skills: Python, R, JavaScript, HTML/CSS, Java, C, OCaml, SQL, machine learning
Interests: Hiking, running, drawing, and writing (won Scholastic Writing Awards for Poetry & Essay/Memoir)