Shreya Chowdhary

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Research Interests

Public interest technology, ethics and technology, design research, human-computer interaction, computer-supported cooperative work, feminist and critical theory

Education

B.S. in Engineering with a Concentration in Computing   Aug 2018 - May 2022
Franklin W. Olin College of Engineering (GPA: 3.7/4.0)   Needham, MA
Recipient of Olin Merit Scholarship ($24k per semester for eight semesters)

Relevant Coursework: Software Design; User-Oriented Collaborative Design; Data Science; Machine Learning; Protests, Politics, and Change: Social Movements; Affordable Design and Entrepreneurship

Research Experience

Undergraduate Research Intern   June 2022 - August
Microsoft Research Fairness, Accountability, Transparency and Ethics   2022
Group (Advisor: Koustuv Saha)
Project: Towards Responsible Consenting Practices for Worker Wellbeing Sensing Technologies
- Developed theoretical framework to describe how feminist approaches to consent can support meaningful consent to worker wellbeing sensing technologies by addressing common issues with normative consent practices
- Conducted multi-stakeholder focus-group based study to identify socio-technical interventions to support meaningful consent to these technologies

Undergraduate thesis researcher   August 2021 - May
Olin College of Engineering (Advisor: Erhardt Graeff)   2022
Project: Developing Feminist Technologists
- Aimed to define the characteristics, skills, and values of feminist technologists and qualities of transformative learning experiences that develop students into feminist technologists
- Conducted literature review on feminist HCI, critical computing, and engineering education to understand need for feminist computing, current examples of feminist computing, and why feminist computing education can lead to feminist technologists
- Qualitatively studied feminist technologists at different points in development (students and professionals) through semi-structured interviews

Undergraduate researcher   September 2020 to
Olin College of Engineering (Advisor: Erhardt Graeff)   Present
Project: Design Refusal as Re-politicization
- Conducted self-directed research on design refusal and engineers' sense of professional responsibility, drawing from personal experience doing design refusal
- Studied literature across multiple disciplines (anthropology, sociology, history, STS, feminist theory, and others) to construct a definition of design refusal as a philosophy
- Studied literature on engineering education and pedagogy to understand and develop means to teach engineers-in-training how to do design refusal
- Analyzed case studies of design refusal and synthesized a common methodology

Publications and Media Coverage

Shreya Chowdhary, Anna Kawakami, Alexandra Olteanu, Mary L. Gray, and Koustuv Saha. Towards Responsible Consenting Practices for Worker Wellbeing Sensing Technologies. [Under Preparation]

Anna Kawakami, **Shreya Chowdhary,** Shamsi T. Iqbal, Q. Vera Liao, Alexandra Olteanu, Jina Suh, and Koustuv Saha. Sensing Wellbeing in the Workplace, Why and For Whom? Examining Multi-Stakeholder Concerns and Desires. [Under Review]

Shreya Chowdhary, Sam Daitzman, Ruby Eisenbud, Emma Pan, and Erhardt Graeff. IEEE Technol. Soc. Mag. 40(3): 50-52 (2021)

Shreya Chowdhary, Sam Daitzman, Ruby Eisenbud, Emma Pan, and Erhardt Graeff. 2020. Care and Liberation in Creating a Student-Led Public Interest Technology Clinic. *2020 IEEE International Symposium on Technology and Society (ISTAS)* (2020), 164-175. https://doi.org/10.1109/ISTAS50296.2020.9462188

(quoted) Zachary Del Rosario. 2021. "Why STEM Students Need to Learn Design Refusal". *AACU Liberal Education,* 107, 2. https://www.aacu.org/liberaleducation/2021/spring/delRosario

(quoted) The Art of Saying "No": Design Refusal. https://www.olin.edu/news-events/2021/the-art-saying-%E2%80%9Cno%E2%80%9D-design-refusal/

Public Presentations

Towards Responsible Consenting Practices for Worker Wellbeing Sensing Technologies
Microsoft Research Montreal All-Hands (August 2022)

Design Refusal as Public Interest Technology
A Better Tech Conference (October 2021)

Engineering Education in the Public Interest
2nd Colloquium on the Global State of the Art in Engineering Education (December 2020)

Care and Liberation in Creating a Student-Led Public Interest Technology Clinic
IEEE ISTAS (November 2020)

Panel on Student Perspectives on PIT Inspirations and Pathways
Public Interest Technology University Network (PIT-UN) (July 2020)

Launching a Student-Run Public Interest Technology Initiative
PIT-UN Undergraduate Informatics Conference (March 2020)

Design No Harm
Olin College of Engineering (February 2020)

Other Professional Experience

Software Engineer

September 2022 - Present

Amazon Robotics
- Developed software for robots to navigate autonomous dynamically-structured environments
- Collaborated with other team members on projects related to human-robot interaction and path planning

January 2019 - May 2022

Co-Founder and Organizer

Public Interest Technology Clinic (PInT) at Olin
- Helped create and manage a student-run pro-bono technical consulting clinic that connects Olin students to public interest organizations in need of technical help
- Helped scope and define clinic projects and navigate relationships with external stakeholders
- Designed scaffolding to teach student clinic teams agile development, project management, and human-centered design methodologies
- Led conversations about public interest technology and professional responsibility in computing
- Led reading group on topics related to the public interest (including current events, sustainability, feminism, etc. and how they relate to technology)
- Organized speaker events and panels to connect Olin students to PIT professionals
- Helped write and win a $90,000 grant to support clinic programs (one of 20 recipients across the country)

Project Manager and Developer

August 2021 - May 2022

Santos Volpe Senior Capstone Team
- Led final year of development of Android app for more efficient and thorough collection of traffic crash data
- Developed new features using ReactJS and Python to improve the user experience
- Designed new user-friendly interface for customization to better meet jurisdiction needs for crash data
- Conducted user testing on app's interface
- Managed meetings with liaisons from various governmental organizations (Volpe Center at the DOT, National Highway Traffic Safety Administration, etc.)
- Managed three other developers

Software Development Intern   May 2021 - August 2021

Amazon Robotics
- Developed software to help robotics navigate autonomous dynamically-structured environments
- Designed visualization tool using ROS and React to ease process of debugging trajectory planning algorithm by visualizing trajectories and demonstrating effect of tuning parameters on generated trajectories
- Managed self-directed project and presented progress to team and other stakeholders

Team Member   January 2021 - May 2021

Rights & Privacy Affordable Design and Entrepreneurship Team
- Worked with five other students on using data science for police abolition in Massachusetts
- Analyzed recent Massachusetts Supreme Court case (Long v. Commonwealth) and identified opportunities for data science intervention to help dismiss evidence acquired during discriminatory traffic stops
- Assisted in developing sustained relationships with community organizations that serve over-policed communities
- Filed FOIA requests for traffic stops within Brockton Police Department
- Led conversations and reflections within team on the history and ideology of police and prison abolition

Digital Services and Design Intern

NYC Mayor's Office of the Chief Technology Officer
- Placed through the Princeton Center for Information Technology Policy PIT Summer Fellowship (one of 10 fellows)
- Implemented landing page for LGBTQI+ inclusivity in the workplace guide using React, HTML, and CSS
- Designed infrastructure for landing pages as a service to help other public interest organizations easily share resources
- Conducted user research and database design for translation management system to optimize machine translation and increase access to city resources for non-English speaking New Yorkers

Teaching Experience

Writing Tutor for Democracy and Media   August 2020 -
Served as writing tutor for foundational arts, humanities, and social   December 2020;
sciences course and provided students individual help on writing   August 2021 -
public narratives. Also provided general writing assistance (including   December 2021
help with analyzing evidence and structuring papers) for students
outside the course.

Course Assistant for Software Design   January 2020 - May
Held office hours to help students with assignments and open-ended   2020; August 2020 -
projects; assisted students one-on-one; provided feedback and   December 2020;
suggestions on students' deliverables. Head CA in FA20, managing   January 2022 - May
other course assistants.   2022

Academic Resource Coach   January 2020 - May
Offered general support on academic skills like time management,   2020
goal setting, reflection academic experience, boundary setting,
motivation, and more. Met with students one-on-one to offer
individualized help.

Course Assistant for Olin First Year Introduction   August 2019 -
Designed and executed a lesson to teach effective communication   December 2019
skills. Assisted with other lessons on adjusting to college, diversity &
inclusion, financial aid, job searches, and more.

Service

Student Government President   May 2020 - May 2021
Olin College
- Represented student body in process to determine college's
  path for Fall 2020; facilitated conversations between students
  and the rest of the college about a fair and safe path for the
  entire community
- Led weekly meetings to engage students with other parts of
  the college, respond to students' requests, and facilitated
  change within the college
- Advocated for students in board meetings and meetings with
  administration
- Managed student government budget

Inter-collegiate Student Representative   September 2019 - May
Olin College   2020

- Worked with representatives from Babson and Wellesley to organize events to foster connection in the three-college consortium (between Olin, Babson, and Wellesley)