

Samantha Robertson

PH.D. STUDENT @ U.C. BERKELEY · ELECTRICAL ENGINEERING & COMPUTER SCIENCES · HCI+AI

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Education

University of California, Berkeley

Berkeley, CA, USA

PH.D. ELECTRICAL ENGINEERING AND COMPUTER SCIENCES

2019 - Present

- Advisors: Dr. Niloufar Salehi and Dr. Moritz Hardt
- M.S. awarded May 2021

Stanford University

Stanford, CA, USA

B.S. MATHEMATICAL AND COMPUTATIONAL SCIENCES

2015 - 2019

- Degree awarded with Distinction (top 15%)

Research

Understanding Adolescent Menstrual Health through Tracking App Data

U.C. Berkeley

ADVISOR: DR. KIM HARLEY

August 2021 - Present

- Analyzing survey responses and log data from a tracking app for over 10,000 adolescents using R to understand how behavioral factors affect adolescent menstrual health. Developing a follow-up survey to investigate how research with tracking app data could actively engage users to improve research outcomes.

Configuring Student Assignment Algorithms to Meet Community Needs

U.C. Berkeley

ADVISOR: DR. NILOUFAR SALEHI

January 2020 - Present

- Conducted mixed method analysis to understand how families engage with algorithms for assigning students to public schools. Identified tensions between the algorithm's design and real world conditions that create challenges for meeting educational equity goals.

A Human-Centered Approach to Machine Translation

U.C. Berkeley & Google

ADVISOR: DR. NILOUFAR SALEHI

June 2020 - Present

- Developed and ran a survey to understand how users assess the quality of machine translation (MT). Developed an interactive system to help users improve their input to a translation model by suggesting rephrasings based on the training data.

Internships

Research Intern, Ethical AI Team

Google

ADVISOR: DR. MARK DÍAZ

May 2021 - Present

- Conducting a mixed method user study to understand the extent to which dominant evaluation methods for MT capture meaningful errors in conversational settings.

Publications

CONFERENCES

Samantha Robertson, Tonya Nguyen, and Niloufar Salehi. 2021. Modeling Assumptions Clash with the Real World: Transparency, Equity, and Community Challenges for Student Assignment Algorithms. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI '21)*.

Pavan Mehrotra, Sabar Dasgupta, **Samantha Robertson**, and Paul Nuyujukian. 2018. An open-source realtime computational platform (short WIP paper). In *Proceedings of the 19th ACM SIGPLAN/SIGBED International Conference on Languages, Compilers, and Tools for Embedded Systems (LCTES 2018)*.

UNDER REVIEW & IN PREPARATION

Samantha Robertson, Tonya Nguyen, and Niloufar Salehi. 2021. Not Another School Resource Map: Meeting Underserved Families' Information Needs Requires Trusting Relationships and Personalized Care. Under revision for *CSCW 2022*.

Daniel J. Liebling, **Samantha Robertson**, and Wesley Hanwen Deng. Directions for HCI Research on Machine Translation Systems. Under review at *CHI 2022*.

WORKSHOPS

Samantha Robertson, Wesley Hanwen Deng, Timnit Gebru, Margaret Mitchell, Daniel J. Liebling, Michal Lahav, Katherine Heller, Mark Díaz, Samy Bengio, and Niloufar Salehi. 2021. Three Directions for the Design of Human-Centered Machine Translation. *HCI + NLP Workshop at EACL '21*

Samantha Robertson, Tonya Nguyen, and Niloufar Salehi. 2020. Modeling Assumptions Clash with the Real World: Configuring Student Assignment Algorithms to Serve Community Needs. *4th Workshop on Mechanism Design for Social Good (MD4SG '20)*. 🏆 **Best “New Horizons” Paper.**

Samantha Robertson and Niloufar Salehi. 2020. What if I Don't Like Any of the Choices? The Limits of Preference Elicitation for Participatory Algorithm Design. *Workshop on Participatory Approaches to Machine Learning at ICML '20*

Awards & Fellowships

2021 **Google-BAIR Commons Project Funding**, BAIR Open Research Commons

2020 **Honorable Mention, Graduate Research Fellowship Program**, NSF

2019 **EECS Excellence Award**, U.C. Berkeley Electrical Engineering & Computer Sciences
Elected to Phi Beta Kappa, Stanford University

J.E. Wallace Sterling Award for Academic Achievement, Stanford University, *Awarded to 25 graduating students in the Stanford School of Humanities and Sciences*

Presentations & Invited Talks

Transparency, Equity, and Community Challenges for Student Assignment Algorithms

Spring 2021 **Invited Talk, Center for Applied Data Ethics Speaker Series**, University of San Francisco
Guest Lecture, Algorithms & Society, University of Michigan

Fall 2020 **Guest Lecture, Market Design and Resource Allocation in Non-Profit Settings**, Stanford

Teaching Experience

Fall 2020 **AI for Medicine and Health Policy**, Teaching Assistant, U.C. Berkeley

Spring 2019 **Data Challenge Lab**, Teaching Assistant, Stanford University

Skills

Languages **R, Python, SQL**, C, C++, HTML/CSS, Java, Javascript

Tools & Packages Git, Unix, Tidyverse, Jupyter, \LaTeX , MongoDB, PyTorch, SciKit-Learn, Qt

Data Visualization ggplot2, seaborn, matplotlib, Shiny

Research Methods Interviews, Surveys, Experiment Design, Qualitative Analysis, Exploratory Data Analysis, Applied ML