Samantha Robertson

PH.D. CANDIDATE @ 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*
- Advised by Dr. Niloufar Salehi
- Dissertation title: Building User Trust and Agency in Data Systems

M.S. ELECTRICAL ENGINEERING AND COMPUTER SCIENCES   *May 2021*
- Advisors: Dr. Niloufar Salehi and Dr. Moritz Hardt

Stanford University   *Stanford, CA, USA*

B.S. MATHEMATICAL AND COMPUTATIONAL SCIENCES   *June 2019*
- Degree awarded with Distinction (top 15%)

Internships

Machine Learning Research Intern, Machine Intelligence Visualization   *Apple*

SUPERVISED BY DR. FRED HOHMAN AND DR. MARY BETH KERY   *May - September 2022*

Designed, built, and evaluated an interactive visualization tool that helps machine translation practitioners prioritize model evaluation resources on issues that matter to users.

Research Intern, Ethical AI   *Google*

SUPERVISED BY DR. MARK DÍAZ   *May - Dec 2021*

Designed and conducted a mixed method user study to understand users' strategies for identifying and recovering from machine translation errors, and when those strategies fall short.

Publications

CONFERENCES

Samantha Robertson, Tonya Nguyen, Cathy Hu, Catherine Albiston, Afshin Nikzad, and Niloufar Salehi. 2021. Expressiveness, Cost, and Collectivism: How the Design of Preference Languages Shapes Participation in Algorithmic Decision-Making. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23)*.

Samantha Robertson*, Zijie J. Wang*, Dominik Moritz, Mary Beth Kery, and Fred Hohman. 2023. ANGLER: Helping Machine Translation Practitioners Prioritize Model Improvements. In *Proceedings of the 2023 Conference on Human Factors in Computing Systems (CHI '23)*.

Samantha Robertson, Tonya Nguyen, and Niloufar Salehi. Not Another School Resource Map: Meeting Underserved Families' Information Needs Requires Trusting Relationships and Personalized Care In *Proceedings of the ACM on Human-Computer Interaction, CSCW (CSCW '22)*. 🏆 **Recognized for contribution to Diversity and Inclusion.**

Samantha Robertson, and Mark Díaz. Understanding and Being Understood: User Strategies for Identifying and Recovering From Mistranslations in Machine Translation-Mediated Chat. In *Proceedings of the 2022 ACM Conference on Fairness, Accountability, and Transparency (FAccT 2022)*

Nikita Mehandru, **Samantha Robertson**, and Niloufar Salehi. Reliable and Safe Use of Machine Translation in Medical Settings. In *Proceedings of the 2022 ACM Conference on Fairness, Accountability, and Transparency (FAccT 2022)*.

Daniel Liebling, Katherine Heller, **Samantha Robertson**, and Wesley Hanwen Deng. Opportunities for Human-Centered Evaluation of Machine Translation Systems. In *Findings of the Association for Computational Linguistics: NAACL 2022*.

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)*.

Workshops

Samantha Robertson, Kim Harley, and Niloufar Salehi. 2022. Engaging Research Participants with Self-Logged Menstrual Health Data. *Workshop on Human-in-the-Loop Data Analytics (HILDA)*, co-located with *SIGMOD 2022*

Wesley Hanwen Deng, Nikita Mehandru, **Samantha Robertson**, and Niloufar Salehi. 2022. Beyond General Purpose Machine Translation: The Need for Context-specific Empirical Research to Design for Appropriate User Trust. *Workshop on Trust and Reliance in AI-Human Teams*, at *CHI 2022*

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

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*

Invited Talks

Human-Centered Tools for Reliable Use of Machine Translation

Fall '22	**Invited Talk, EPIC Data Lab Retreat**, U.C. Berkeley

Extracting and exploring patterns in text data

Spring '22	**Guest Lecture, Investigative Watchdog Reporting**, Stanford University

Transparency, Equity, and Community Challenges for Student Assignment Algorithms

Spring '21	**Invited Talk, Center for Applied Data Ethics Speaker Series**, University of San Francisco
	Guest Lecture, Algorithms & Society, University of Michigan
Fall '20	**Guest Lecture, Market Design and Resource Allocation in Non-Profit Settings**, Stanford University

Teaching

Spr 2023	**Human-Centered AI**, Teaching Assistant, U.C. Berkeley
Fall 2020	**AI for Medicine and Health Policy**, Teaching Assistant, U.C. Berkeley
Spr 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
Research Methods	Interviews, Qualitative Data Analysis, Exploratory Data Analysis, Applied ML, Data Visualization