

Harmanpreet Kaur

Computer Science & Engineering
University of Minnesota - Twin Cities
5-215 Keller Hall
Minneapolis MN 55455

harmank@umn.edu
<https://harmanpk.github.io>

Employment

- 09/2023 – **University of Minnesota - Twin Cities.** Minneapolis, MN
present Assistant Professor, Department of Computer Science & Engineering
- 05/2020 – **Allen Institute for Artificial Intelligence.** Seattle, WA
08/2020 Research Intern, Semantic Scholar Team
Mentors: Jonathan Bragg, Doug Downey, Dan Weld
- 05/2019 – **Microsoft Research.** New York City, NY
08/2019 Research Intern, Fairness, Accountability, Transparency and Ethics in AI Team
Mentors: Jenn Wortman Vaughan, Hanna Wallach, Rich Caruana
- 05/2018 – **Microsoft Research.** Redmond, WA
08/2018 Research Intern, Information and Data Sciences Group
Mentors: Shamsi Iqbal, Jaime Teevan
- 05/2017 – **Microsoft Research.** Redmond, WA
08/2017 Research Intern, Productivity Team
Mentors: Shamsi Iqbal, Jaime Teevan
- 05/2015 – **Epic Systems Corporation.** Verona, WI
08/2015 Software Development Intern

Education

- 07/2023 **University of Michigan.** Ann Arbor, MI
Ph.D. in Information and Computer Science & Engineering
Thesis: *Where are the Humans in Human-AI Interaction: The Missing Human-Centered Perspective on Interpretability Tools for Machine Learning*
Advisors: Cliff Lampe and Eric Gilbert
Committee: Mark Ackerman, Eytan Adar, Shamsi Iqbal, Jenn Wortman Vaughan
- 12/2019 **University of Michigan.** Ann Arbor, MI
M.S. in Computer Science & Engineering
- 05/2016 **University of Minnesota - Twin Cities.** Minneapolis, MN
B.S. in Computer Science (*summa cum laude*)
Thesis Advisors: Loren Terveen and Brent Hecht
- 05/2013 **Indiana University - Purdue University Indianapolis.** Indianapolis, IN
Worked towards a B.S. in Computer Engineering; transferred out after 1st year

Awards & Honors

2022	Rising Star in EECS
2022	FAccT Doctoral Consortium Funding
2021–2023	Google PhD Fellowship in HCI
2021	University of Michigan Teh-Hsun Lee Award
2020	Best Paper Honorable Mention, CHI 2020 for [c9]
2020	Best Paper Honorable Mention, IUI 2020 for [c10]
2018	HCOMP Doctoral Consortium Funding
2015–2016	University of Minnesota Hopper-Dean Scholarship
2012–2013	IUPUI Dean’s Recognition Scholarship

Publications

Heavily Refereed Conference and Journal Papers

- [c16] **Harmanpreet Kaur**, Matthew Conrad, Davis Rule, Cliff Lampe, and Eric Gilbert. Interpretability Gone Bad: The Role of Bounded Rationality in How Practitioners Understand Machine Learning. *To appear in Proceedings of the ACM - Human Computer Interaction (PACM-HCI), presented at CSCW 2024*
- [c15] **Harmanpreet Kaur**, Doug Downey, Amanpreet Singh, Evie Yu-Yen Cheng, Daniel Weld, and Jonathan Bragg. FeedLens: Polymorphic Lenses for Personalizing Exploratory Search over Knowledge Graphs. *In Proceedings of the ACM Conference on User Interface Software and Technology (UIST 2022)*
- [c14] **Harmanpreet Kaur**, Eytan Adar, Eric Gilbert, and Cliff Lampe. Sensible AI: Re-imagining Interpretability and Explainability using Sensemaking Theory. *In Proceedings of the ACM Conference on Fairness, Accountability, and Transparency (FAccT 2022)*
- [c13] **Harmanpreet Kaur**, Daniel McDuff, Alex Williams, Jaime Teevan, and Shamsi Iqbal. “I Didn’t Know I Looked Angry”: Characterizing Observed Emotion and Reported Affect at Work. *In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2022)*
- [c12] Oana Inel, Tomislav Duricic, **Harmanpreet Kaur**, Elisabeth Lex, and Nina Tintarev. Design Implications for Explanations: Supporting Reflective Assessment of Videos on Controversial Topics. *Frontiers in Artificial Intelligence 2021*
- [c11] David Alvarez Melis, **Harmanpreet Kaur**, Hal Daumé, Hanna Wallach, and Jenn Wortman Vaughan. A Human-Centered Approach to Interpretability Using Weight of Evidence. *In Proceedings of the AAAI Conference on Human Computation and Crowdsourcing (HCOMP 2021)*
- [c10] **Harmanpreet Kaur**, Cliff Lampe, and Walter Lasecki. Using Affordances to Improve AI Support of Social Media Posting Decisions. *In Proceedings of the 25th ACM International Conference on Intelligent User Interfaces (IUI 2020)*
[Best Paper Honorable Mention]

- [c9] **Harmanpreet Kaur**, Harsha Nori, Samuel Jenkins, Rich Caruana, Hanna Wallach, and Jenn Wortman Vaughan. Interpreting Interpretability: Understanding Data Scientists' Use of Interpretability Tools for Machine Learning. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2020)*
[Best Paper Honorable Mention]
- [c8] **Harmanpreet Kaur**, Alex Williams, Daniel McDuff, Mary Czerwinski, Jaime Teevan, and Shamsi Iqbal. Optimizing for Happiness and Productivity: Modeling Opportune Moments for Task Transitions and Breaks at Work. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2020)*
- [c7] Alex Williams, **Harmanpreet Kaur**, Jaime Teevan, Ryen White, Shamsi Iqbal, and Adam Fourney. Mercury: Empowering Programmers' Mobile Work Practices with Microproductivity. In *Proceedings of the 32nd ACM User Interface Software and Technology Symposium (UIST 2019)*
- [c6] **Harmanpreet Kaur**, Alex Williams, Anne Loomis Thompson, Walter Lasecki, Shamsi Iqbal, and Jaime Teevan. Creating Better Action Plans for Writing Tasks via Vocabulary-Based Planning. In *Proceedings of the International ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2018)*
- [c5] Raymond Fok, **Harmanpreet Kaur**, Skanda Palani, Martez Mott, and Walter Lasecki. Towards More Robust Speech Interactions for Deaf and Hard of Hearing Users. In *Proceedings of the 20th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2018)*
- [c4] Akshay Rao, **Harmanpreet Kaur**, Walter Lasecki. Plexiglass: Multiplexing Passive and Active Tasks for More Efficient Crowdsourcing. In *Proceedings of the AAAI Conference on Human Computation and Crowdsourcing (HCOMP 2018)*
- [c3] Alex Williams, **Harmanpreet Kaur**, Gloria Mark, Anne Loomis Thompson, Shamsi Iqbal, and Jaime Teevan. Supporting Workplace Detachment and Reattachment with Conversational Intelligence. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2018)*
- [c2] **Harmanpreet Kaur**, Mitchell Gordon, Yiwei Yang, Jeffrey Bigham, Jaime Teevan, Ece Kamar, Walter Lasecki. CrowdMask: Using Crowds to Preserve Privacy in Crowd-Powered Systems via Progressive Filtering. In *Proceedings of the 5th AAAI Conference on Human Computation and Crowdsourcing (HCOMP 2017)*
- [c1] F. Maxwell Harper, Funing Xu, **Harmanpreet Kaur**, Kyle Condiff, Shuo Chang, and Loren Terveen. Putting users in control of their recommendations. In *Proceedings of the 9th ACM Conference on Recommender Systems (RecSys 2015)*

Refereed Short Papers, Late-Breaking Works, and Posters

- [s2] **Harmanpreet Kaur**, Alex Williams, Anne Loomis Thompson, Walter Lasecki, Shamsi Iqbal, and Jaime Teevan. Using Vocabularies to Collaboratively Create Better Plans for Writing Tasks. In *Proceedings of 2018 Extended CHI Conference on Human Factors in Computing Systems - Late Breaking Works Track. (CHI 2018)*

- [s1] **Harmanpreet Kaur**, Isaac Johnson, Hannah Miller, Loren Terveen, Cliff Lampe, Brent Hecht, and Walter Lasecki. Oh The Places You'll Share: An Affordances-Based Model of Social Media Posting Behaviors. *In Proceedings of 2018 Extended CHI Conference on Human Factors in Computing Systems - Late Breaking Works Track. (CHI 2018)*

Refereed Workshop Submissions

- [w7] **Harmanpreet Kaur**. The Role of Bounded Rationality in Human-AI Collaboration. *In the Understanding and Mitigating Cognitive Biases in Human-AI Collaboration Workshop at the ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2023)*
- [w6] **Harmanpreet Kaur**, Harsha Nori, Samuel Jenkins, Rich Caruana, Hanna Wallach, and Jenn Wortman Vaughan. Interpreting Interpretability: Understanding Data Scientists' Use of Interpretability Tools for Machine Learning. *In the Data Science with Human in the Loop Workshop at the ACM Conference on Knowledge Discovery and Data Mining (KDD 2021)*
- [w5] Davis Alvarez Melis, **Harmanpreet Kaur**, Hal Daumé, Hanna Wallach, and Jenn Wortman Vaughan. A Human-Centered Interpretability Framework Based on Weight of Evidence. *In the Human-Centered Perspectives in Explainable AI Workshop at the ACM Conference on Human Factors in Computing Systems (CHI 2021)*
- [w4] **Harmanpreet Kaur**, Alex Williams and Walter Lasecki. Building Shared Mental Models Between Humans and AI for Effective Collaboration. *In the Where is the Human? Bridging the Gap Between AI and HCI Workshop at the ACM Conference on Human Factors in Computing Systems (CHI 2019)*
- [w3] Alex Williams, **Harmanpreet Kaur**, Edith Law, and Ed Lank. Guiding Attention with Tasks and Emotions in Conversational Agents. *In the Conversational Agents: Acting on the Wave of Research and Development Workshop at the ACM Conference on Human Factors in Computing Systems (CHI 2019)*
- [w2] Sai Gouravajhala, **Harmanpreet Kaur**, Raymond Fok, and Walter Lasecki. Challenges in Making Situated Interactions Accessible to Motor-Impaired Users. *In the Accessible Voice Interfaces Workshop at the International ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2018)*
- [w1] **Harmanpreet Kaur**, Cliff Lampe, and Walter Lasecki. Crowdsourcing Law and Policy via Crowd-Civic Systems. *In the Crowdsourcing Law and Policy: A Design-Thinking Approach to Crowd-Civic Systems Workshop at the International ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2017)*

Invited Posters

- [p5] **Harmanpreet Kaur**. Leveraging Human Cognition for AI Interaction. *EECS Rising Stars, Austin TX, 2023*
- [p4] **Harmanpreet Kaur**. Designing to Support Cognitive and Social Heuristics in Human-AI Interaction. *Microsoft Research AI Breakthroughs Workshop, Redmond WA, 2020*

- [p3] **Harmanpreet Kaur.** Characterizing Shared Mental Models for Human-AI Collaboration. *Microsoft Research AI Breakthroughs Workshop*, Redmond WA, 2019
- [p2] **Harmanpreet Kaur**, Brent Hecht, Cliff Lampe, and Walter Lasecki. To Share or Not to Share: An Affordances-Based Modeling of Social Media Usage For Posting Content. *CRA-W Grad Cohort*, Washington DC, 2017
- [p1] **Harmanpreet Kaur**, Hannah Miller, and Loren Terveen. Building Feeds Without Friends. *University of Minnesota Undergraduate Research Symposium*, Minneapolis, MN. April 2016

Refereed Workshop, SIGs, Panels Organized

- [o1] Wesley Hanwen Deng, Glen Berman, **Harmanpreet Kaur**, Reva Schwartz, Memunat A. Ibrahim, Motahhare Eslami, Kenneth Holstein, and Michael Madaio. Collaboratively Designing and Evaluating Responsible AI Interventions. *Special Interest Group organized at the ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2024)*

Doctoral Consortia

- [d2] **Harmanpreet Kaur.** The Role of Human Cognition in Interpretability and Explainability. *Doctoral Consortium at the ACM Conference on Fairness, Accountability, and Transparency (FAccT 2022)*
- [d1] **Harmanpreet Kaur.** Hybrid Intelligence Organizations. *Doctoral Consortium at the AAAI Conference on Human Computation and Crowdsourcing (HCOMP 2018)*

Misc Posters and Presentations

- [m1] Maryam Bacchus and **Harmanpreet Kaur.** Understanding the Impact of Generative AI Assistance in Writing-Based Tasks. *University of Minnesota Research Showcase (2024)*

Grants and Research Awards

- | | |
|------|---|
| 2024 | PI: Google Academic Research Award (co-PI: Loren Terveen), unrestricted gift. \$100,000. |
| 2024 | PI: Microsoft AI and the New Future of Work Award, unrestricted gift. \$50,000. |
| 2024 | PI: TikTok Academic Research Award, unrestricted gift. \$100,000. |

Invited Talks

Seminar Talks

- | | |
|---------|---|
| 05/2024 | CSE 50th and Golden Medallion Society Reunion, University of Minnesota |
| 04/2024 | Twin Cities Software Process Improvement Network (TwinSPIN) |
| 09/2023 | Human-Computer Interaction Seminar, Stanford University |
| 03/2023 | Computer Science Seminar, University of Maryland |
| 03/2023 | Computer Science Seminar, Northeastern University |

03/2023 **Computer Science Seminar, Brown University**
 02/2023 **Computer Science Seminar, University of Illinois - Urbana Champaign**
 02/2023 **Computer Science Seminar, University of Minnesota - Twin Cities**
 02/2023 **People + AI Research Group, Google**
 02/2023 **Computer Science Seminar, Emory University**
 01/2023 **Computer Science Seminar, University of California - Los Angeles**
 12/2022 **Data Science / Computational Social Science Seminar, University of Michigan**
 08/2021 **Deep Learning Day at KDD 2021**
 12/2020 **AI Seminar, Ohio State University**
 09/2020 **Microsoft Research AI Breakthroughs Workshop**

Other Talks and Panels

10/2024 **Perceptions of Higher Education in an Era of Artificial Intelligence [Panelist]**
 Academy of Distinguished Teachers Retreat, University of Minnesota

04/2024 **Artificial Intelligence: What is it and what will it mean to us? [Panelist]**
 America's Service Commissions (ASC) National Service Training Conference

04/2024 **In Your PhD Era?: A PhD Panel for Honors Students [Panelist]**
 University Honors Program, University of Minnesota

12/2023 **Job Market Information Panel [Organizer]**
 Computer Science & Engineering, University of Minnesota

10/2023 **A Human-Centered Approach to AI [Panelist]**
 Thirst for Knowledge, University of Minnesota

Teaching

University of Minnesota

Fall 2023 CSci 8980 - Human-Centered AI
 Fall 2024 CSci 8115 - Theoretical Foundations of Human-Centered Computing

Guest Lectures

04/2024 **COMP 440 – Collective Intelligence, Macalester College**
 Designing Human-Centered Explainable AI

04/2024 **CSci 3901 – Intro to Research for Undergraduates, University of Minnesota**
 Designing Human-Centered Artificial Intelligence

09/2022 **CS 279R – Human-AI Interaction Seminar, Harvard University**
 Leveraging Human Cognition in AI Interaction

02/2021 **CSci 8115 – Graduate Research Methods in HCI, University of Minnesota**
 Experimental Design Methods for Human-AI Interaction

10/2019 **EECS 598 – Human-AI Interaction Seminar, University of Michigan**
 Shared and Team Mental Models for Human-AI Collaboration

Certificates

05/2022 – **Center for Research on Learning and Teaching (CRLT) Certificate**
06/2022 Preparing Future Faculty Seminar, University of Michigan
Certificate designed to teach future faculty about higher education opportunities, course design and assessment, and equity-focused teaching.

Teaching Assistantships

Winter 2019 **SI 106 - Programs, Information, People (Introduction to Programming)**
University of Michigan
Graduate Student Instructor

Winter 2018 **EECS 498/598 – Social Computing**
University of Michigan
Graduate Student Instructor

Fall 2015 **CSci 1901H – Introduction to Python Programming for Honors Students**
University of Minnesota - Twin Cities
Undergraduate Teaching Assistant

Winter 2013 **CHEM-C 105 - Principles of Chemistry I**
Indiana University - Purdue University Indianapolis
Peer-Led Team Learning Mentor

Student Advising and Mentorship

PhD Student Advising

Anna Martin-Boyle
Malik Khadar
Syeda Masooma Naqvi

PhD Oral and Written Exam Committees

Moyan Zhou
Vishal Kuvar
Jenny Bauer

Master's Students

Malik Khadar
Ruichen He
Gayathri Balaji
Luka Ludden

Undergraduate Research Assistants

University of Minnesota
Angelique Laju
Amoligha Timma
Gunnar Jagodzinske
Maryam Bacchus (REU student from Vassar College)

University of Michigan
Davis Rule [c16]

Matthew Conrad [c16]
Anne Lin
Kayla Wiggins
Kayleigh Merz
Shaily Fozdar
Akshay Rao [c4]
Emmie Zhang
Raymond Fok [c5, w2]
Spencer Hanson

Professional Activities and Service

Conference Chair Roles

Works-in-Progress and Demos Co-Chair, HCOMP 2024
Publicity Co-Chair, HCOMP 2020
Documentation Chair, UIST 2020
CrowdCamp Co-Chair, HCOMP 2019

Program Committee/Associate Editor

Associate Chair, CHI 2024-2025 – Understanding People (Statistical and Quantitative Methods)
Formal Reviewer, FAccT 2022-2024 – HCI
Formal Reviewer, HCOMP 2024

Conference and Journal Reviewing

CHI 2018-2024 (*Special Recognition for Outstanding Reviews: 2023x2, 2024*)
UIST 2019-2020, 2022-2023 (*Special Recognition for Outstanding Reviews: 2023*)
International Journal of Human-Computer Studies 2023
CSCW 2017-2020, 2022-2024 (*Special Recognition for Outstanding Reviews: 2020, 2024*)
ECSCW 2024
CHI Late Breaking Works 2020-2022
ACM Transactions on Computer-Human Interaction (ToCHI) 2020, 2022
Human-Computer Interaction Journal 2022
DIS 2021
HCOMP 2017-2020
CIKM 2020
IMWUT 2019

Other Service

Assistant to Subcommittee Chairs – Specific Application Areas, CHI 2023
Assistant to General Chairs, CHI 2017
Student Volunteer, CHI 2017-2018

Service to University of Minnesota

Co-Organizer, Human-Centered Computing Seminar Series, 2024
Written Preliminary Examinations and PhD Evaluations Committee, 2024
Computer Science Inclusiveness, Diversity, Equity, and Advocacy (CS-IDEA) Committee, 2023

Service to University of Michigan

Student Organizer, Michigan Interactive and Social Computing (MISC) Seminar Series, 2019-2020

PhD Student Mentor, 2018-2019

Student Liaison, CSE and School of Information, 2017-2018

Student Host, HCI Faculty Recruitment in CSE, 2017-2018

Research Experience

- 11/2019 – **University of Michigan.** Ann Arbor, MI
- 08/2023 Interactive Systems Lab (CSE) and comp.social lab (SI)
Graduate Student Research Assistant

- 09/2016 – **University of Michigan.** Ann Arbor, MI
- 10/2019 CROMA (Crowds + Machines) Lab
Graduate Student Research Assistant

- 08/2014 – **University of Minnesota - Twin Cities.** Minneapolis, MN
- 08/2016 GroupLens Research Lab
Undergraduate Researcher