

# 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

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- 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

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- 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

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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]
2015–2016	University of Minnesota Hopper-Dean Scholarship
2012–2013	IUPUI Dean’s Recognition Scholarship
2018	HCOMP Doctoral Consortium Funding

## Publications

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### 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 9<sup>th</sup> 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

## 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)*

## Invited Talks

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### Seminar Talks

- 04/2024 **Twin Cities Software Process Improvement Network (TwinSPIN)**  
Leveraging Social Theories to Enhance Human-AI Interaction
- 09/2023 **Human-Computer Interaction Seminar, Stanford University**  
Leveraging Social Theories to Enhance Human-AI Interaction
- 03/2023 **Computer Science Seminar, University of Maryland**  
Leveraging Social Theories to Enhance Human-AI Interaction
- 03/2023 **Computer Science Seminar, Northeastern University**  
Leveraging Social Theories to Enhance Human-AI Interaction
- 03/2023 **Computer Science Seminar, Brown University**  
Leveraging Social Theories to Enhance Human-AI Interaction
- 02/2023 **Computer Science Seminar, University of Illinois - Urbana Champaign**  
Leveraging Social Theories to Enhance Human-AI Interaction
- 02/2023 **Computer Science Seminar, University of Minnesota - Twin Cities**  
Leveraging Social Theories to Enhance Human-AI Interaction
- 02/2023 **People + AI Research Group, Google**  
Leveraging Social Theories to Enhance Human-AI Interaction
- 02/2023 **Computer Science Seminar, Emory University**  
Leveraging Social Theories to Enhance Human-AI Interaction
- 01/2023 **Computer Science Seminar, University of California - Los Angeles**

Leveraging Social Theories to Enhance Human-AI Interaction

12/2022 **Data Science / Computational Social Science Seminar, University of Michigan**  
Leveraging Human Cognition in AI Interaction

08/2021 **Deep Learning Day at KDD 2021**  
Interpretability: Understanding Data Scientists' Use of Interpretability Tools for Machine Learning

12/2020 **AI Seminar, Ohio State University**  
Leveraging Human Cognition in AI Interaction

09/2020 **Microsoft Research AI Breakthroughs Workshop**  
Designing to Support Cognitive and Social Heuristics in Human-AI Interaction

### Other Talks and Panels

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

10/2023 **Thirst for Knowledge, University of Minnesota**  
Panel on a Human-Centered Approach to AI

## Teaching

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### University of Minnesota

Fall 2023 CSci 8980 - Human-Centered AI

### 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	<b>SI 106 - Programs, Information, People (Introduction to Programming)</b> University of Michigan Graduate Student Instructor
Winter 2018	<b>EECS 498/598 – Social Computing</b> University of Michigan Graduate Student Instructor
Fall 2015	<b>CSci 1901H – Introduction to Python Programming for Honors Students</b> University of Minnesota - Twin Cities Undergraduate Teaching Assistant
Winter 2013	<b>CHEM-C 105 - Principles of Chemistry I</b> Indiana University - Purdue University Indianapolis Peer-Led Team Learning Mentor

## Student Advising and Mentorship

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### PhD Oral and Written Exam Committees

Anna Martin-Boyle  
Moyan Zhou

### Master's Students

Malik Khadar  
Ruichen He  
Gayathri Balaji

### Undergraduate Research Assistants

*University of Minnesota*  
Angelique Laju  
Amoligha Timma

*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

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### 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 – Understanding People (Statistical and Quantitative Methods)  
Formal Reviewer, FAccT 2022-2024 – HCI

### Conference and Journal Reviewing

CHI 2018-2023 (*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

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

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- 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