

Harmanpreet Kaur

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Computer Science & Engineering
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Research Interests

I study human-AI teams: designing approaches that support both human and AI components in building shared mental models and understanding each other. To do so, I design interfaces that help people with information discovery about AI, while accounting for bounded rationality; and study affordances to identify more context-friendly representations of different domains for AI.

Areas: Human-Computer Interaction, Artificial Intelligence, Computer-Supported Co-operative Work, Cognitive Psychology, Organizational Science, Crowdsourcing

Education

09/2016 – present **University of Michigan** PhD Student in Computer Science and Information
Ann Arbor, MI Advisors: Cliff Lampe and Eric Gilbert

08/2013 – 05/2016 **University of Minnesota-Twin Cities** BS in Computer Science (*summa cum laude*)
Minneapolis, MN Thesis Advisors: Loren Terveen and Brent Hecht

08/2012 – 05/2013 **Indiana University-Purdue University Indianapolis** BS in Computer Engineering
Indianapolis, IN (transferred out after 1st year)

Professional Experience

05/2020 – 08/2020 **Semantic Scholar Team, Allen Institute of AI** Research Intern
Ann Arbor, MI Mentors: Jonathan Bragg, Doug Downey, Dan Weld
(Working remotely with the Seattle team)

11/2019 – present **Interactive Systems Lab (CSE) and Social Media Research Lab (SI), University of Michigan** Graduate Student and Researcher
Ann Arbor, MI

05/2019 – 08/2019 **Fairness, Accountability, Transparency and Ethics in AI (FATE) Team, Microsoft Research** Research Intern
New York City, NY Mentors: Jenn Wortman Vaughan, Hanna Wallach, Rich Caruana

- 05/2018 – 08/2018 **Information and Data Sciences Group, Microsoft Research** Research Intern
Redmond, WA Mentors: Shamsi Iqbal, Jaime Teevan
- 05/2017 – 08/2017 **Productivity Team, Microsoft Research** Research Intern
Redmond, WA Mentors: Shamsi Iqbal, Jaime Teevan
- 09/2016 – 10/2019 **CROMA (Crowds+Machines) Lab, University of Michigan** Graduate Student and
Ann Arbor, MI Researcher
- 08/2014 – 08/2016 **GroupLens Research Lab, University of Minnesota** Undergraduate Researcher
Minneapolis, MN Recommender Systems research using the MovieLens platform (a movie recommender system), and Social Computing research on social media ecology.
Advisors: Loren Terveen, Brent Hecht, Max Harper
- 05/2015 – 08/2015 **Epic Systems Corporation** Software Development Intern
Verona, WI Added infrastructure and UI for new widgets in their iPad Application. Code moved into production cycle, being used by doctors to check reports for patients in the ICU.
- 01/2014 – 07/2014 **GroupLens Research Lab, University of Minnesota** Software Developer
Minneapolis, MN Designed new features for MovieLens website such as *movie tuner* (a tag-based filter for similar movies), *user ratings profile page* (used nvd3 library for graphical representation), *tag and genre + tag based searches* (using Elasticsearch); *email service API*, etc.
Mentor: Max Harper
- 01/2013 – 05/2013 **Technology, Leadership and Communication Dept, IUPUI** Technical Intern
Indianapolis, IN Developed the course website and wrote technical content for the department.

Publications

Conference Papers

- C.10 **H. Kaur**, C. Lampe, and W.S. 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)* [[IUI Best Paper Honorable Mention](#)]
- C.09 **H. Kaur**, H. Nori, S. Jenkins, R. Caruana, H. Wallach, and J.W. 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)* [[CHI Best Paper Honorable Mention](#)]
- C.08 **H. Kaur**, A.C. Williams, D. McDuff, M. Czerwinski, J. Teevan, and S.T. 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)*
- C.07 A.C. Williams, **H. Kaur**, J. Teevan, R. White, S.T. Iqbal, and A. Fourney. Mercury: Empowering Programmers' Mobile Work Practices with Microproductivity. In *Proceedings of the 32nd ACM User Interface Software and Technology Symposium (UIST 2019)*

- C.06 **H. Kaur**, A.C. Williams, A.L. Thompson, W.S. Lasecki, S.T. Iqbal, and J. 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)*
- C.05 R. Fok, **H. Kaur**, S. Palani, M. Mott, and W.S. 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)*
- C.04 A. Rao, **H. Kaur**, W.S. Lasecki. Plexiglass: Multiplexing Passive and Active Tasks for More Efficient Crowdsourcing. In *Proceedings of the AAAI Conference on Human Computation and Crowdsourcing (HCOMP 2018)*.
- C.03 A. Williams, **H. Kaur**, G. Mark, A.L. Thompson, S. Iqbal, J. Teevan. Supporting Workplace Detachment and Reattachment with Conversational Intelligence. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2018)*
- C.02 **H. Kaur**, M. Gordon, Y. Yang, J. Bigham, J. Teevan, E. Kamar, W.S. Lasecki. Crowd-Mask: 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)*
- C.01 F.M. Harper, F. Xu, **H. Kaur**, K. Condiff, S. Chang, L. Terveen. Putting users in control of their recommendations. In *Proceedings of the 9th ACM Conference on Recommender Systems (RecSys 2015)*

Posters and Abstracts

- P.04 **H. Kaur**, A.C. Williams, A.L. Thompson, W.S. Lasecki, S. Iqbal, and J. Teevan. Using Vocabularies to Collaboratively Create Better Plans for Writing Tasks. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2018)*
- P.03 **H. Kaur**, I. Johnson, H.J. Miller, L.G. Terveen, C. Lampe, B. Hecht, W.S. Lasecki. Oh The Places You'll Share: An Affordances-Based Model of Social Media Posting Behaviors. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2018)*
- P.02 **H. Kaur**, B. Hecht, C. Lampe, W. Lasecki. To Share or Not to Share: An Affordances-Based Modeling of Social Media Usage For Posting Content. CRA-W Grad Cohort Workshop, Washington DC, 2017
- P.01 **H. Kaur**, H. Miller, L. Terveen. Building Feeds Without Friends. *University of Minnesota Undergraduate Research Symposium*, Minneapolis, MN. April 2016

Workshop and Consortia Papers

- W.05 **H. Kaur**, A.C. Williams and W.S. Lasecki. Building Shared Mental Models Between Humans and AI for Effective Collaboration. In *Workshop at the ACM Conference on Human Factors in Computing Systems (CHI 2019)*

- W.04 A.C. Williams, **H. Kaur**, E. Law, and E. Lank. Guiding Attention with Tasks and Emotions in Conversational Agents. *In Workshop at the ACM Conference on Human Factors in Computing Systems (CHI 2019)*
- W.03 S.R. Gouravajhala, **H. Kaur**, R. Fok, and W.S. Lasecki. Challenges in Making Situated Interactions Accessible to Motor-Impaired Users. *In Workshop at the International ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2018)*
- W.02 **H. Kaur**. Hybrid Intelligence Organizations. *Doctoral Consortium at the AAAI Conference on Human Computation and Crowdsourcing (HCOMP 2018)*
- W.01 **H. Kaur**, C. Lampe, and W.S. Lasecki. Crowdsourcing Law and Policy via Crowd-Civic Systems. *In Workshop at the International ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2017)*

Teaching

- 01/2019 – 04/2019 **Graduate Student Instructor - Programs, Information, and People - Intro to University of Michigan Python Programming (SI 106)**
- 01/2018 – 04/2018 **Graduate Student Instructor - Social Computing Systems (EECS 498/598) University of Michigan** Helped organize the class and plan course topics, provided feedback on student projects
- 09/2015 – 12/2015 **Teaching Assistant - Intro to Programming for Honors students (CSCI 1133H) University of Minnesota** Led lab sections, held office hours, and helped plan assignments and lab exercises.
- 01/2013 – 05/2013 **Peer-Led Team Learning Mentor - Principles of Chemistry I (CHEM C105) IUPUI** Led a weekly discussion section on lecture topics for 10 students.

Awards

- 2017 - 2019 **Rackham Conference Travel Grant**
- 2017 - 2019 **School of Information Conference Travel Grant**
- 09/2015 – 05/2016 **University of Minnesota Hopper-Dean Scholarship**
- 09/2015 – 05/2016 **Undergraduate Research Opportunities Program Award**
- 08/2012 – 05/2016 **University of Minnesota Dean's List**
- 08/2012 – 05/2013 **IUPUI Dean's Recognition Scholarship**

Service

- 2020 **HCOMP Publicity Co-Chair**

- 2019-2020 UIST Documentation Chair
- 2019-2020 Michigan Interactive and Social Computing (MISC) Seminar Series – Student Organizer
- 2019 HCOMP CrowdCamp Co-Chair
- 2017 - 2018 CSE – School of Information Student Liaison
- 2017 - 2019 Reviewer for CHI 2018-2020, CSCW 2017-2020, IMWUT 2019, UIST 2019, HCOMP 2017-2018
- 2017-2018 Student Volunteer for CHI 2017, CHI 2018

Advising

Undergraduates

- 2018-2019 Kayla Wiggins, University of Michigan
- 2019 Shaily Fozdar, University of Michigan
- 2018 Anne Lin, University of Michigan
- 2017-2018 Emmie Zhang, University of Michigan
- 2017-2018 Kayleigh Merz, University of Michigan
- 2017 Spencer Hanson, University of Michigan

Press

MIT Tech Rev., 2020 “Why asking an AI to explain itself can make things worse.” January 29