Ashish Sharma

Paul G. Allen School of Computer Science and Engineering
University of Washington

✉ ashshar@cs.washington.edu
🌐 https://ash-shar.github.io
🎓 Google Scholar

Education

University of Washington, Seattle, WA, USA   *Sep 2019 – Aug 2024 (Expected)*
PhD student in Computer Science
🎓 **JP Morgan Chase AI Research PhD Fellow**

Indian Institute of Technology, Kharagpur, India   *Jul 2013 – Jun 2018*
Dual Degree in Computer Science (Bachelor and Master of Technology)
🏆 **Student-Par Excellence Award**

Research Experience

University of Washington, Seattle, WA, USA   *Sep 2019 – Present*
Research Assistant
Advisor: Tim Althoff
Thesis Committee: Tim Althoff, Noah Smith, Ranjay Krishna, Alexis Hiniker, Adam Miner

Microsoft Research, Redmond, USA   *Jun 2022 – Sep 2022*
Research Intern
Advisors: Sudha Rao, Bill Dolan, Chris Brockett, Nebojsa Jojic

Microsoft Research, Bengaluru, India   *Jul 2018 – Aug 2019*
Research Fellow
Advisor: Monojit Choudhury

University of Illinois at Urbana-Champaign, Urbana, IL, USA   *May 2017 – Jul 2017*
Research Intern
Advisor: Hari Sundaram

Adobe Systems, Bengaluru, India   *May 2016 – Jul 2016*
Research Intern
Advisor: Sunav Choudhary

Indian Institute of Technology, Kharagpur, India   *Jan 2016 – Jun 2018*
Research Assistant
Advisor: Niloy Ganguly

Representative Publications

Cognitive Reframing of Negative Thoughts through Human-Language Model Interaction
Ashish Sharma, Kevin Rushton, Inna Lin, David Wadden, Khendra Lucas, Adam Miner, Theresa Nguyen, and Tim Althoff
ACL 2023 [pdf] [project page] [code]
🏆 **Outstanding Paper Award**

Human-AI Collaboration Enables More Empathic Conversations in Text-based Peer-to-Peer Mental Health Support
Ashish Sharma, Inna Lin, Adam Miner, David Atkins, and Tim Althoff
Nature Machine Intelligence 2023 [pdf] [video] [project page]

Towards Facilitating Empathic Conversations in Online Mental Health Support: A Reinforcement Learning Approach
Ashish Sharma, Inna Lin, Adam Miner, David Atkins, and Tim Althoff
The Web Conference (WWW) 2021 [pdf] [talk] [video] [project page]
Also presented at IJCAI 2022, *Sister Best Paper Conference Track*
🏆 **Best Paper Award**

A Computational Approach to Understanding Empathy Expressed in Text-Based Mental Health Support
Ashish Sharma, Adam Miner, David Atkins, and Tim Althoff
EMNLP 2020 [pdf] [talk] [project page]

Engagement Patterns of Peer-to-Peer Interactions on Mental Health Platforms
Ashish Sharma, Monojit Choudhury, Tim Althoff, and Amit Sharma
ICWSM 2020 [pdf] [talk]

CommBox: Real-Time Cricket Shot Identification and Commentary Generation using Sensors
Ashish Sharma, Jatin Arora, Pritam Khan, Sidhartha Satapathy, Sumit Agarwal, Satadal Sengupta, Sankarshan Mridha, and Niloy Ganguly
COMSNETS 2017 [pdf] [video]
🏆 **Best Academic Demo Award**

Other Publications

A Computational Framework for Behavioral Assessment of LLM Therapists
Ashish Sharma*, Yu Ying Chiu*, Inna Lin, and Tim Althoff
arxiv 2024 [pdf]

Facilitating Self-Guided Mental Health Interventions Through Human-Language Model Interaction: A Case Study of Cognitive Restructuring
Ashish Sharma, Kevin Rushton, Inna Lin, Theresa Nguyen, and Tim Althoff
arxiv 2023 (*under review*) [pdf]

Investigating Agency of LLMs in Human-AI Collaboration Tasks
Ashish Sharma, Sudha Rao, Chris Brockett, Akanksha Malhotra, Nebojsa Jojic, and Bill Dolan
arxiv 2023 (*under review*) [pdf]

Gendered Mental Health Stigma in Masked Language Models
Inna Lin, Lucille Njoo, Anjalie Field, **Ashish Sharma**, Katharina Reinecke, Tim Althoff, and Yulia Tsvetkov
EMNLP 2022 [pdf]

A Linguistic Annotation Framework to Study Interactions in Multilingual Healthcare Conversational Forums
Ishani Mondal, Kalika Bali, Mohit Jain, Monojit Choudhury, **Ashish Sharma**, Evans Gitau, Jacki O'Neill, Kagonya Awori, and Sarah Gitau
LAW Workshop, EMNLP 2021 [pdf]

Going Beyond Content Richness: Verified Information Aware Summarization of Crisis-Related Microblogs
Ashish Sharma, Koustav Rudra, and Niloy Ganguly
CIKM 2019 [pdf]

Insights from the Long-Tail: Learning Latent Representations of Online User Behavior in Presence of Skew & Sparsity
Adit Krishnan, **Ashish Sharma**, and Hari Sundaram
CIKM 2018 [pdf] [code]

An Adversarial Approach to Improve Long-Tail Performance in Neural Collaborative Filtering [Short Paper]
Adit Krishnan, **Ashish Sharma**, Aravind Sankar, and Hari Sundaram
CIKM 2018 [pdf] [code]

Identifying and Analyzing Different Aspects of English-Hindi Code-Switching in Twitter
Koustav Rudra, **Ashish Sharma**, Kalika Bali, Monojit Choudhury, and Niloy Ganguly
TALLIP 2019 [pdf]

Classifying and Summarizing Information from Microblogs during Epidemics
Koustav Rudra, **Ashish Sharma**, Niloy Ganguly, and Muhammad Imran
Information Systems Frontiers 2018 [pdf]

Characterizing and Countering Communal Microblogs during Disaster Events
Koustav Rudra, **Ashish Sharma**, Niloy Ganguly, and Saptarshi Ghosh
Transactions on Computational Social Systems 2018 [pdf]

Classifying Information from Microblogs during Epidemics
Koustav Rudra, **Ashish Sharma**, Niloy Ganguly, and Muhammad Imran
Digital Health 2017 [pdf]

I May Talk in English but Gaali Toh Hindi Mein Hi Denge: A Study of English-Hindi Code-Switching and Swearing Pattern on Social Networks
Prabhat Agarwal, **Ashish Sharma**, Jeenu Grover, Mayank Sikka, Koustav Rudra, and Monojit Choudhury
COMSNETS 2017 [pdf]

Characterizing Communal Microblogs During Disaster Events [Short Paper]
Koustav Rudra, **Ashish Sharma**, Niloy Ganguly, and Saptarshi Ghosh
ASONAM 2016 [pdf]

Achievements and Awards

Outstanding Paper Award at ACL 2023	*2023*
JP Morgan Chase AI Research PhD Fellowship (*one of the 13 fellows across the U.S. and U.K.*)	*2023*
Best Paper Award at WWW 2021	*2021*
Student Par-Excellence Award by Computer Science Department, IIT Kharagpur	*2019*
SIGIR Student Travel Grant for attending CIKM 2019	*2019*
Best Academic Demo Award at COMSNETS 2017	*2017*
S.N. Bose Scholarship (*one of the 50 scholars from India*)	*2017*
Goralal Syngal Memorial Scholarship for academic excellence during 2015-2016	*2016*
Student Travel Grant for attending COMSNETS 2017	*2017*

Invited Talks

Mental Health America Conference *Cognitive Reframing of Negative Thoughts through Human-Language Model Interaction*	*Jun 8, 2023*
Headspace Conversational AI Journal Club *Human-AI Collaboration Enables Empathic Conversations in Mental Health Support*	*May 25, 2022*
Issaquah High School Artificial Intelligence Club *Human-AI Collaboration to Encourage Empathic Conversations in Mental Health Support*	*Nov 22, 2021*
Research Running on Cloud Compute and Emerging Technologies, 2021 *Leveraging Cloud Compute for Improving Empathy in Mental Health Support*	*Aug 10, 2021*
Crime Lab, University of Chicago *Towards Facilitating Empathic Conversations in Online Mental Health Support*	*Feb 26, 2021*
University of Connecticut *NLP for Mental Health*	*Mar 2, 2020*

Media Coverage

Allen School News on *Can AI take a joke? Allen School researchers [...]* 📰		*Aug 2023*
Allen School News on *Model researchers: Allen School's Ashish Sharma [...]* 📰		*Aug 2023*
Scientific American on *AI Chatbots Could Help Provide Therapy, but Caution Is Needed* 📰		*Jun 2023*
Dr. Tracey Marks' Youtube Channel on *7 questions to ask to check [...] (Video)* 🎥		*May 2023*
Right as Rain by UW Medicine on *Can AI teach you how to communicate [...]?* 📰		*Apr 2023*
The Washington Post on *We keep trying to make AI therapists. It's not working* 📰		*Feb 2023*
Infobae on *Cómo la inteligencia artificial puede ayudar a tener empatía [...]* 📰		*Feb 2023*
NPR on *Can AI help increase expression of empathy?* 📰		*Feb 2023*
Bioengineer.org on *How AI can help people be more empathetic [...]* 📰		*Feb 2023*
MedicalXpress on *How AI can help people be more empathetic [...]* 📰		*Feb 2023*
OPB on *UW study looks at how AI can help people have more empathetic conversations [...]* 📰		*Feb 2023*
UW News on *How AI can help people be more empathetic [...]* 📰		*Jan 2023*
Allen School News on *With HAILEY, researchers demonstrate how AI can lend [...]* 📰		*Jan 2023*
Microsoft Enable on *University of Washington Empathy Project (Video)* 🎥		*Jan 2023*
Science 2.0 on *TalkLife And AI Can Help People Be More Empathetic About Mental Health* 📰		*Jan 2023*
Deutschlandfunk on *Automatische Empathie-Korrektur* 📰		*Jan 2023*
Psychology Today on *Can Human-AI Collaboration Enhance Empathy?* 📰		*Nov 2022*
Microsoft Accessibility Blog on *Human-AI Collaboration to Encourage [...]* 📰		*Sep 2022*
Allen School News on *Allen School's Tim Althoff, Ashish Sharma and Inna Lin win [...]* 📰		*Jun 2021*
Wall Street Journal on *Can Artificial Intelligence Replace Human Therapists?* 📰		*Mar 2021*
Stanford Human-Centered Artificial Intelligence on *Augmenting Psychotherapy with AI* 📰		*Jan 2021*

Teaching Experience

Head TA for *CSE547, Machine Learning for Big Data, University of Washington*	*Spring 2021*
Head TA for *CSE547, Machine Learning for Big Data, University of Washington*	*Spring 2020*
TA for *CS29003, Algorithms Laboratory, Indian Institute of Technology, Kharagpur*	*Spring 2018*
TA for *CS31003, Compilers, Indian Institute of Technology, Kharagpur*	*Fall 2017*

Student Mentoring

Kelly Chiu, *MS student at UW*	*May 2023 – Present*
Ethan Hsu, *MS student at Penn State University*; now a Ph.D. student at UT Austin	*Aug 2021 – Feb 2022*
Inna Lin, *MS student at Cornell University*; now a Ph.D. student at UW	*Jun 2020 – Jun 2021*

Service

Workshop Co-organizer	Human-Centered Large Language Modeling Workshop at ACL 2024
PC/Reviewer	ACL 2023, ICWSM 2023, CHI 2023, ACL 2022, ARR 2022, EMNLP 2022, NAACL 2022, WWW 2022, ICWSM 2022, CHI 2022, KDD 2022, W-NUT 2022, ACL 2021, EMNLP 2021, WWW 2021, ICWSM 2021, MAISoN 2021, W-NUT 2021, ACL 2020, EMNLP 2020, TCSS 2020
Sub-Reviewer	NAACL 2019, PAKDD 2019
Volunteer	PLO 2019, COSMNETS 2017

Relevant Coursework

AI	Speech and Natural Language Processing, Machine Learning, Deep Learning, Artificial Intelligence, Interactive Learning
Data Mining	Information Retrieval, Scalable Data Mining, Social Computing, Economic and Financial Network Analysis
Systems	Distributed Systems, Database Management Systems, Cloud Computing
Miscellaneous	Computational Ethics in NLP, Big and Small Data for Health, Smartphone Computing and Applications, Image Processing, Probability and Statistics, Operations Research