Do, Hyo Jin

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RESEARCH INTERESTS

My research lies at the intersection of human-computer interaction (HCI) and artificial intelligence (AI). I focus on designing and developing AI systems that enhance human-AI collaboration, improve user experience and technology acceptance, and mitigate potential harms and risks.

My key research projects include:

- Exploring methods for presenting factuality scores and source attributions of LLM outputs [1, 2, 5, d4]
- Developing and open-sourcing <u>EvalAssist</u>, a human-in-the-loop LLM-as-a-judge tool [3, 4, d1]
- Inventing AI attribution approaches to explain AI contributions in human-AI co-created content [w1, d3]
- Designing conversational natural language interfaces to enhance human-AI collaboration [6, 7, 8]
- · Investigating practitioners' experiences in generative AI governance and designing related tools [d2]
- Implementing conversational agents for team collaboration [9, 10, 11] and empathetic interactions [12, d5]

EDUCATION

University of Illinois at Urbana-Champaign (UIUC)

Urbana, IL, US

Ph.D. in Computer Science | Interactive Computing Group

Aug 2016 - May 2023

- Advisor: Brian P. Bailey | Co-advisor: Karrie Karahalios
- Dissertation: Designing a Conversational Agent for Promoting Participation of Under-Contributing Members in a Small Group Chat Discussion (Link)
- GPA: 3.91/4.0 (98/100)

Korea Advanced Institute of Science and Technology (KAIST)

Daejeon, South Korea

Master of Science in Computer Science | Artificial Intelligence Group

Sep 2013 - Feb 2016

- Advisor: Ho-Jin Choi
- Thesis: Korean Twitter Emotion Classification and Application (Link)
- GPA: 3.74/4.3 (94/100)

Korea University (KU)

Seoul, South Korea

Bachelor of Science in Computer Science (Minor: Brain and Cognitive Sciences)

Mar 2009 - Aug 2013

Honor: ValedictorianGPA: 4.07/4.5 (95.1/100)

National University of Singapore (NUS)

Singapore

Exchange Student in Computer Science

Aug 2010 - May 2011

PROFESSIONAL EXPERIENCE

IBM Research

Cambridge, MA, US

Research Scientist (Full-time) | Human-centered Trustworthy AI Research

Jan 2023 - Current

• Planned and conducted human-centered AI research, including designing and developing AI systems, conducting user studies, analyzing both quantitative and qualitative data, and communicating findings.

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IBM Research

Cambridge, MA, US

Al Intern | Al Experience Team

May 2022 - Aug 2022

Designed conversational agents for end-user programming tasks and conducted user studies

IBM Research Yorktown Heights, NY, US

Research Graduate Intern | Finance Research Team

May 2019 - Aug 2019

Conducted user studies to understand model risk management practices in financial institutions

Bank of Korea Seoul, South Korea

Economist Jan 2016 - Jun 2016

Administered Economic Statistics System (ecos.bok.or.kr) and managed IT-related projects

Samsung Electronics Suwon, South Korea

Software Engineer Intern | Android Development Team

Dec 2011 - Feb 2012

- Designed and implemented an app in which users can exchange contacts using NFC and write diaries
- Proposed a central system for managing in-app device configurations (won the Best Team Project Award)

TEACHING EXPERIENCE

Teaching Assistant Urbana, IL, US

University of Illinois Urbana-Champaign

Aug 2016 - Dec 2021

Honors & Awards:

- Graduate Teacher Certificate (Spring 2022)
- List of Teachers Ranked as Excellent (Fall 2021)

Courses:

- CS465 User Interface Design (Spring 2017-19, Fall 2019, Spring 2021, Fall 2021)
- CS498/416 Data Visualization (Summer 2020 & 2021)
- CS125 Introduction to Computer Science (Spring & Fall 2020)
- CS548 Models of Cognitive Processes (Fall 2018)
- CS225 Data Structures (Fall 2017)
- CS440 Artificial Intelligence (Fall 2016)

Teaching AssistantDaejeon, South Korea

Korea Advanced Institute of Science and Technology (KAIST)

Sep 2013 - Jun 2014

Courses:

- CS476/BiS481 Collective Intelligence in Biomedical Applications (Spring 2014)
- CS360 Introduction to Databases (Fall 2013)

Lecturer (World Friends ICT Volunteer)

Accra, Ghana

University of Ghana

Jul 2012 - Aug 2012

Lectured Android programming course to university undergraduate and graduate students every weekday

KEY PUBLICATIONS

[1] Hide or Highlight: Understanding the Impact of Factuality Expression on User Trust Hyo Jin Do and Werner Geyer

Proceedings of the AAAI/ACM Conference on Artificial Intelligence, Ethics and Society (AIES), 2025

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[2] Highlight All the Phrases: Enhancing LLM Transparency through Visual Factuality Indicators
Hyo Jin Do, Rachel Ostrand, Werner Geyer, Keerthiram Murugesan, Dennis Wei, and Justin Weisz

Proceedings of the AAAI/ACM Conference on Artificial Intelligence, Ethics and Society (AIES), 2025

[3] Generate, Evaluate, Iterate: Synthetic Data for Human-in-the-Loop Refinement of LLM Judges Hyo Jin Do, Zahra Ashktorab, Jasmina Gajcin, Erik Miehling, Martín Santillán Cooper, Qian Pan, Elizabeth M. Daly, Werner Geyer ArXiv, 2025

[4] EvalAssist: Insights on Task-Specific Evaluations and Al-Assisted Judgment Strategy Preferences
Zahra Ashktorab, Michael Desmond, Qian Pan, James M. Johnson, Martin Santillán Cooper, Elizabeth M.
Daly, Rahul Nair, Tejaswini Pedapati, Hyo Jin Do, and Werner Geyer
Proceedings of the Annual ACM Symposium on User Interface Software and Technology (UIST), 2025

[5] Multi-Level Explanations for Generative Language Models
Lucas Monteiro Paes, Dennis Wei, Hyo Jin Do, Hendrik Strobelt, Ronny Luss, Amit Dhurandhar, Manish
Nagireddy, Karthikeyan Natesan Ramamurthy, Prasanna Sattigeri, Werner Geyer, and Soumya Ghosh
Proceedings of the Annual Meeting of the Association for Computational Linguistics (ACL), 2025

[6] Grounding with Structure: Exploring Design Variations of Grounded Human-Al Collaboration in a Natural Language Interface

Hyo Jin Do, Michelle Brachman, Casey Dugan, James M. Johnson, Julia Lauer, Priyanshu Rai, and Qian Pan *Proceedings of the ACM on Human-Computer Interaction (PACM HCI)*, CSCW, 2024

- [7] Evaluating What Others Say: The Effect of Accuracy Assessment in Shaping Mental Models of Al Systems Hyo Jin Do, Michelle Brachman, Casey Dugan, Qian Pan, Priyanshu Rai, James M. Johnson, Roshni Thawani Proceedings of the ACM on Human-Computer Interaction (PACM HCI), CSCW, 2024
- [8] Follow the Successful Herd: Towards Explanations for Improved Use and Mental Models of Natural Language Systems

Michelle Brachman, Qian Pan, **Hyo Jin Do**, Casey Dugan, Arunima Chaudhary, James M Johnson, Priyanshu Rai, Tathagata Chakraborti, Thomas Gschwind, Jim A Laredo, Christoph Miksovic, Paolo Scotton, Kartik Talamadupula, and Gegi Thomas

Proceedings of the International Conference on Intelligent User Interfaces (IUI), 2023

[9] Inform, Explain, or Control: Techniques to Adjust End-User Performance Expectations for a Conversational Agent Facilitating Group Chat Discussions

Hyo Jin Do, Ha-Kyung Kong, Pooja Tetali, Karrie Karahalios, and Brian P Bailey *Proceedings of the ACM on Human-Computer Interaction (PACM HCI)*, CSCW, 2023

[10] To Err is AI: Imperfect Interventions and Repair in a Conversational Agent Facilitating Group Chat Discussions

Hyo Jin Do, Ha-Kyung Kong, Pooja Tetali, Jaewook Lee, and Brian P Bailey *Proceedings of the ACM on Human-Computer Interaction (PACM HCI)*, CSCW, 2023

[11] How Should the Agent Communicate to the Group? Communication Strategies of a Conversational Agent in Group Chat Discussions

Hyo Jin Do, Ha-Kyung Kong, Jaewook Lee, and Brian P. Bailey *Proceedings of the ACM on Human-Computer Interaction (PACM HCI)*, CSCW, 2022

[12] Do You Have Time for a Quick Chat? Designing a Conversational Interface for Sexual Harassment Prevention Training

Hyo Jin Do, Seon Hye Yang, Boo-Gyoung Choi, Wayne T. Fu, and Brian P. Bailey *Proceedings of the International Conference on Intelligent User Interfaces (IUI)*, 2021

[13] Burst Your Bubble! An Intelligent System for Improving Awareness of Diverse Social Opinions Mingkun Gao, **Hyo Jin Do**, and Wai-Tat Fu

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Proceedings of the International Conference on Intelligent User Interfaces (IUI), 2018

[14] An Intelligent Interface for Organizing Online Opinions on Controversial Topics

Mingkun Gao, Hyo Jin Do, and Wai-Tat Fu

Proceedings of the International Conference on Intelligent User Interfaces (IUI), 2017

ORGANIZED WORKSHOPS

[w1] Navigating Generative AI Disclosure, Ownership, and Accountability in Co-Creative Domains

Hyo Jin Do, Molly Q Feldman, Jessica He, Angel Hsing-Chi Hwang, and Seyun Kim

Adjunct Proceedings of the Annual Symposium on Human-Computer Interaction for Work (CHIWORK), 2025

BOOK CHAPTERS

[b1] Computational Methods for Socio-Computer Interaction

Wai-Tat Fu, Mingkun Gao, and **Hyo Jin Do**

Oxford University Press, 2018

DEMO, WORKSHOP, & SHORT PAPERS

[d1] Synthetic Data for Evaluation: Supporting LLM-as-a-Judge Workflows with EvalAssist

Martín Santillán Cooper, Zahra Ashktorab, **Hyo Jin Do**, Erik Miehling, Werner Geyer, Jasmina Gajcin, Elizabeth M Daly, Qian Pan, and Michael Desmond

Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP): System Demonstrations, 2025

[d2] Understanding Industry Practitioners' Experiences in Generative AI Governance

Hyo Jin Do, Swati Babbar, Wenjing Li, Laura Walks, and Shayenna Misko

Proceedings of the Extended Abstracts of the CHI Conference on Human Factors in Computing Systems, 2025

[d3] Exploring Industry Practices and Perspectives on AI Attribution in Co-Creative Use Cases

Jessica He and Hyo Jin Do

Joint Proceedings of the ACM Intelligent User Interfaces (IUI) Workshops, 2025

[d4] Facilitating Human-LLM Collaboration through Factuality Scores and Source Attributions

Hyo Jin Do, Rachel Ostrand, Justin D. Weisz, Casey Dugan, Prasanna Sattigeri, Dennis Wei, Keerthiram Murugesan, and Werner Geyer

Trust and Reliance in Evolving Human-AI Workflows (TREW) Workshop at CHI, 2024

[d5] Empathic Virtual Assistant for Healthcare Information with Positive Emotional Experience
Hyo Jin Do and Wai-Tat Fu

Proceedings of the IEEE International Conference on Healthcare Informatics (ICHI), 2016

[d6] Analyzing Emotions in Twitter During a Crisis: A Case Study of the 2015 Middle East Respiratory Syndrome Outbreak in Korea

Hyo Jin Do, Chae-Gyun Lim, You Jin Kim, and Ho-Jin Choi

Proceedings of the International Conference on Big Data and Smart Computing (BigComp), 2016

[d7] Korean Twitter Emotion Classification Using Automatically Built Emotion Lexicons and Fine-Grained Features

Hyo Jin Do and Ho-Jin Choi

Proceedings of the Pacific Asia Conference on Language, Information and Computation: Poster, 2015

US PATENTS

[p1] Guiding a user to interact with an intelligent computing system using best practices, 2025

[p2] Computer-based interactive prompt variation generator, 2025