

RESEARCH INTEREST

My research interests fall in the intersection of **human-AI interaction** and **natural language processing**, with the goal of building AI systems that augment how people reason, learn, and work. I (1) develop AI systems that tailor their support to individual users' tasks, context, and evolving goals; (2) design evaluation frameworks and benchmarks that measure AI capabilities in fine-grained, human-interpretable ways; and (3) build user simulators that enable scalable evaluation and training of AI systems, capturing how well they support people's thinking and decision-making.

PROFESSIONAL EXPERIENCE

University of Michigan

Postdoctoral Fellow, Computer Science and Engineering
Advisor: Q. Vera Liao

Ann Arbor, MI, USA

Sept. 2025-

Adobe Research

Research Intern, Document Intelligence Lab
Mentor: Alexa F Siu, Tong Sun

San Jose, CA, USA

May – Sept. 2024

[P7]

Allen Institute for Artificial Intelligence (AI2)

Research Intern, Semantic Scholar Team
Mentor: Pao Siangliulue, Joseph Chee Chang, Jonathan Bragg, Kyle Lo

Seattle, WA, USA

May – Oct. 2023

[C10, C12]

LG AI Research

Research Intern, Advanced Machine Learning Lab
Mentor: Moontae Lee, Kyungjae Lee

Seoul, Republic of Korea

Nov. 2022 – Mar. 2023

[C6]

Electronics and Telecommunications Research Institute (ETRI)

Graduate Research Assistant, Data Sciences Group
Mentor: Yunbae Kim, Seungken Park

Daejeon, Republic of Korea

Mar. 2018 – Dec. 2019

[P1, P2, C1, C2]

EDUCATION

KAIST

Ph.D. in Computer Science, Advisor: Juho Kim

Dissertation Title: *Aligning AI Systems with Human Cognitive Processes for Knowledge Understanding*

Daejeon, Republic of Korea

Sept. 2020 – Aug. 2025

Ewha Womans University

M.S. in Statistics. Advisor: Dongwan Shin

B.S. Major in Mathematics Education, Minor in Statistics; *Magna Cum Laude*

Seoul, Republic of Korea

Mar. 2018 – Feb. 2020

Mar. 2014 – Feb. 2018

PUBLICATIONS

Conference and Journal Papers

[C23] KNOWSIM: Evaluating Information Calibration in LLM Assistants with User Simulators that Learn

Yoonjoo Lee, Hyoungwook Jin, Tae Soo Kim, Shaoyang Zhang, Philippe Laban, Q.Vera Liao

Under review

[C22] Cognitive Alignment: AI Should Align to How Humans Think

Yoonjoo Lee, Philippe Laban, Nishant Balepur, Hariharan Subramonyam, Q.Vera Liao

Under review

[C21] Reviving Code from Papers: Reimplementing HCI Artifacts

Eytan Adar, Yoonjoo Lee, Ning-Er Lei, Q.Vera Liao, Weirui Peng

UIST 2026: ACM Symposium on User Interface Software and Technology

- [C20] DISCOVERLLM: From Executing Intents to Discovering Them**
Tae Soo Kim, **Yoonjoo Lee**, Jaesang Yu, John Joon Young Chung, Juho Kim
ICML 2026: International Conference on Machine Learning
- [C19] Evalet: Evaluating Large Language Models by Fragmenting Outputs into Functions**
Tae Soo Kim*, Heechan Lee*, **Yoonjoo Lee**, Young-Ho Kim, Juho Kim
CHI 2026: ACM Conference on Human Factors in Computing Systems, Outstanding Paper Award
- [C18] Mind the Blind Spots: A Focus-Level Evaluation Framework for LLM Reviews**
Hyungyu Shin, Jingyu Tang, **Yoonjoo Lee**, Nayoung Kim, Hyunseung Lim, Ji Yong Cho, Hwajung Hong, Moontae Lee, Juho Kim
EMNLP 2025: Conference on Empirical Methods in Natural Language Processing, SAC Highlight Award
- [C17] PANORAMA: A Dataset and Benchmark Tasks Capturing the Evaluation Trails and Rationales in Patent Examination**
Hyunseung Lim, Sooyohn Nam, Sungmin Na, Ji Yong Cho, June Yong Yang, Hyungyu Shin, **Yoonjoo Lee**, Juho Kim, Moontae Lee, Hwajung Hong
NeurIPS 2025: Conference on Neural Information Processing Systems
- [C16] "When to Hand Off, When to Work Together": Expanding Human-Agent Co-Creative Collaboration through Concurrent Interaction**
Kihoon Son, Hyewon Lee, DaEun Choi, Yoonsu Kim, Tae Soo Kim, **Yoonjoo Lee**, John Joon Young Chung, HyunJoon Jung, Juho Kim
Under Review, 2026
- [C15] Compositional Stagewise Diffusion for Progressive Generation**
Jaesang Yu, Seoyeon Byun, Tae Soo Kim, **Yoonjoo Lee**, Yilun Du, Juho Kim
Under Review, 2025
- [C14] CUPID: Evaluating Personalized and Contextualized Alignment of LLMs from Interactions**
Tae Soo Kim, **Yoonjoo Lee**, Yoonah Park, Jiho Kim, Young-Ho Kim, Juho Kim
COLM 2025: Conference on Language Modeling
- [C13] ARXIVDIGESTABLES: Synthesizing Scientific Literature into Tables using Language Models**
Benjamin Newman*, **Yoonjoo Lee***, Aakanksha Naik, Pao Siangliulue, Raymond Fok, Juho Kim, Daniel S Weld, Joseph Chee Chang, Kyle Lo
EMNLP 2024: Conference on Empirical Methods in Natural Language Processing
- [C12] The BiGGen Bench: A Principled Benchmark for Fine-grained Evaluation of Language Models with Language Models**
Seungone Kim, Juyoung Suk, Ji Yong Cho, [18 authors], **Yoonjoo Lee**, [5 authors], Sean Welleck, Graham Neubig, Moontae Lee, Kyungjae Lee, Minjoon Seo
NAACL 2025: Conference of the North American Chapter of the Association for Computational Linguistics, Best Paper Award
- [C11] One vs. Many: Comprehending Accurate Information from Multiple Erroneous and Inconsistent AI Generations**
Yoonjoo Lee, Kihoon Son, Tae Soo Kim, Jisu Kim, John Joon Young Chung, Eytan Adar, Juho Kim
FACCT 2024: ACM Conference on Fairness, Accountability, and Transparency

- [C10] **PaperWeaver: Enriching Topical Paper Alerts by Contextualizing Recommended Papers with User-collected Papers**
Yoonjoo Lee, Hyeonsu B Kang, Matt Latzke, Juho Kim, Jonathan Bragg, Joseph Chee Chang, Pao Siangliulue
CHI 2024: ACM Conference on Human Factors in Computing Systems
- [C9] **EvalLM: Interactive Evaluation of Large Language Model Prompts on User-Defined Criteria**
Tae Soo Kim, Yoonjoo Lee, Jamin Shin, Young-Ho Kim, Juho Kim
CHI 2024: ACM Conference on Human Factors in Computing Systems
- [C8] **VIVID: Human-AI Collaborative Authoring of Vicarious Dialogues from Lecture Videos**
Seulgi Choi, Hyewon Lee, Yoonjoo Lee, Juho Kim
CHI 2024: ACM Conference on Human Factors in Computing Systems
- [C7] **QASA: Advanced Question Answering on Scientific Articles**
Yoonjoo Lee*, Kyungjae Lee*, Sunghyun Park, Dasol Hwang, Jaehyeon Kim, Hong-in Lee, Moontae Lee
ICML 2023: International Conference on Machine Learning
- [C6] **Cells, Generators, and Lenses: Design Framework for Object-Oriented Interaction with Large Language Models**
Tae Soo Kim, Yoonjoo Lee, Minsuk Chang, Juho Kim
UIST 2023: ACM Symposium on User Interface Software and Technology
- [C5] **DAPIE: Interactive Step-by-Step Explanatory Dialogues to Answer Children’s Why and How Questions**
Yoonjoo Lee, Tae Soo Kim, Sundong Kim, Yohan Yun, Juho Kim
CHI 2023: ACM Conference on Human Factors in Computing Systems
- [C4] **Promptiverse: Scalable Generation of Scaffolding Prompts Through Human-AI Hybrid Knowledge Graph Annotation**
Yoonjoo Lee, John Joon Young Chung, Tae Soo Kim, Jean Y. Song, Juho Kim
CHI 2022: ACM Conference on Human Factors in Computing Systems
- [C3] **Personalizing Ambience and Illusionary Presence: How People Use “Study with Me” Videos to Create Effective Studying Environments**
Yoonjoo Lee, John Joon Young Chung, Jean Y. Song, Minsuk Chang, Juho Kim
CHI 2021: ACM Conference on Human Factors in Computing Systems
- [C2] **A Machine Learning Approach that meets Axiomatic Properties in Probabilistic Analysis of LTE Spectral Efficiency**
Yoonjoo Lee, Yunbae Kim, Seungken Park
ICTC, Oct. 2019
- [C1] **Probabilistic Analysis of Spectral Efficiency for LTE based on PDCCH Measurement Data**
Yoonjoo Lee, Yunbae Kim, Yeonkyu Park, Seungken Park
IEEE Communications Letters, vol. 23, no. 9, Sep. 2019

Extended Abstracts, Posters, and Workshop Papers

- [P7] **DocVoyager: Anticipating User's Information Needs and Guiding Document Reading through Question Answering**
Yoonjoo Lee, Nedim Lipka, Jack Wang, Puneet Mathur, Ryan Rossi, Tong Sun, Alexa F Siu

CHI 2025 Late-Breaking Work

- [P6] **The Fourth Workshop on Scholarly Document Processing**
Tirthankar Ghosal, Amanpreet Singh, Anita Waard, Philipp Mayr, Aakanksha Naik, Orion Weller,
Yoonjoo Lee, Shannon Shen, Yanxia Qin
ACL 2024 Workshop Co-organizer: Fourth Workshop on Scholarly Document Processing
- [P5] **How to Reflect Diverse People's Perspectives in Large-Scale LLM-based Evaluations?**
Yoonjoo Lee, Tae Soo Kim, Juho Kim
CHI 2024 Workshop on Human-Centered Evaluation and Auditing of Large Language Models
- [P4] **LMCanvas: Object-Oriented Interaction to Personalize Large Language Model-Powered Writing Environments**
Tae Soo Kim, Arghya Sarkar, **Yoonjoo Lee**, Minsuk Chang, and Juho Kim
CHI 2023 Workshop on Generative AI and HCI
- [P3] **Interactive Children's Story Rewriting Through Parent-Children Interaction**
Yoonjoo Lee, Tae Soo Kim, Minsuk Chang, Juho Kim
ACL 2022 Workshop on Intelligent and Interactive Writing Assistant
- [P2] **XDesign: Integrating Interface Design into Explainable AI Education**
Hyungyu Shin, Nabila Sindi, **Yoonjoo Lee**, Jaeryoung Ka, Jean Y. Song, Juho Kim
SIGCSE TS 2022 Posters
- [P1] **A Study on the Distribution Analysis of LTE Resource Block Usage from TSME Measurement Data**
Yoonjoo Lee, Yunbae Kim, Seungken Park
KICS, Jun. 2018

Patents

Multiverse of Reading Paths: Anticipating User's Information Needs and Guiding Reading through Question Answering
Yoonjoo Lee, Nedim Lipka, Jack Wang, Puneet Mathur, Ryan Rossi, Tong Sun, Alexa F Siu.

MENTORING EXPERIENCE

Yubin Choi , PhD student, University of Michigan	Fall 2025 - current
Shaoyang Zhang , Undergrad student, University of Michigan	Fall 2025 - current
Jaesang Yu , Master's student, KAIST	Summer 2024 - current
Heechan Lee , Undergrad student, KAIST >> Master's student, KAIST	Summer 2024 - current
Yoonah Park , Undergrad student, Seoul National University	Winter 2023 - Winter 2024
Jiho Kim , Undergrad student, Calvin University	Summer 2024
Yuewen Yang , Master's student, Cornell Tech	Winter 2023
Seulgi Choi , Master's student, KAIST	Summer 2023
Jisu Kim , Undergrad student, KAIST >> Master's student, Georgia Tech	Winter 2023 - Summer 2023
Yohan Yun , Undergrad student, KAIST >> Master's student, KAIST	Winter 2021 - Summer 2022

HONORS, AWARDS, AND SCHOLARSHIPS

Outstanding Paper Award, CHI	2026
Gold Reviewer Award, ICML	2026
Best Paper Award, NAACL	2025
SAC Highlight Award, EMNLP	2025

Last Updated: November 3, 2025

MIDAS Postdoctoral Affiliate, Michigan Institute for Data and AI in Society (MIDAS) <i>University of Michigan – Selected as one of up to 10 postdoctoral researchers</i>	2025
Best Presentation Award from SIGCHI Invited Papers Session <i>SIGCHI Korea Local Chapter</i>	2024
Research Assistant Scholarship <i>College of Natural Sciences, Ewha Womans University</i>	2019
Honors Scholarship <i>College of Education, Ewha Womans University</i>	2014, 2015, 2016, 2017
Dean's List <i>College of Education, Ewha Womans University</i>	2014, 2015, 2016, 2017

PROFESSIONAL SERVICES

Program Committee

- ARR March (Area Chair)
- CHI 2026 (Associate Chair, Outstanding Reviews), CHI LBW 2023

Workshop Organizer

- 2024 ACL Science Document Processing Workshop
- 2022 KAIST-Google ExploreCSR

Reviewer

- ACM CHI '22-'25, UIST '22-'26 (Outstanding Reviews), DIS '25, IUI '25, CSCW '23, C&C '22-'24, IEEE TLT '22
- ICLR '25, EMNLP '23-'25, ACL '23, ICML '26 (Gold Reviewer Award)

Student Volunteer

CHI 2022

TEACHING EXPERIENCE

Introduction to Algorithms <i>KAIST CS300 Teaching Assistant, Instructor: Sunghee Choi</i>	Spring 2024
Introduction to Data Science <i>KAIST CS492 Teaching Assistant, Instructor: Jaegil Lee</i>	Spring 2022
Introduction to Social Computing <i>KAIST CS473 Teaching Assistant, Instructor: Juho Kim</i>	Fall 2020, Fall 2021
Time Series Analysis <i>Ewha Womans University, Teaching Assistant, Instructor: Dongwan Shin</i>	Spring 2019
Regression Analysis <i>Ewha Womans University, Teaching Assistant, Instructor: Donghwan Lee</i>	Fall 2018

INVITED TALKS

Cognitive Alignment: Building AI Systems That Empower Human Thinking <i>Johns Hopkins University</i>	Apr. 2026
Simulating Human Cognitive Processes for Interactive Evaluation <i>Invited Panelist, CSE 598: AI for Science, University of Michigan</i>	Nov. 2025
Adaptive Knowledge Understanding Support: Aligning AI Systems with Human Cognitive Processes <i>Guest Lecture, EECS 493: User Interface Development, University of Michigan</i>	Apr. 2026
<i>Purdue University</i>	Apr. 2025
<i>Pennsylvania State University</i>	March 2025
<i>Allen Institute for Artificial Intelligence (AI2)</i>	March 2025
<i>Apple MLR group</i>	March 2025

<i>CMU, Co-Augmentation, Learning, & AI (CoALA) Lab, WInE Lab</i>	Feb. 2025
<i>University of Pennsylvania</i>	Feb. 2025
<i>Center for Human-Computer Interaction at Virginia Tech</i>	Jan. 2025
Data Use in LLMs and Human-centered Evaluation	
<i>Guest Lecture, CS475: Machine Learning for Natural Language Processing, KAIST</i>	Dec. 2024
Personalizing AI Systems to Support How Humans Understand Knowledge	
<i>Invited Talk at Google Explore CSR Journey of Research Workshop 2024</i>	Nov. 2024
Teaching Models to Explain: Interactive Step-by-Step Dialogues for Children's Questions	
<i>Invited Talk at HCI KOREA 2024: SIGCHI-Sponsored Top Conferences Session</i>	Jan. 2024
<i>Technical Talk at NAVER AI LAB</i>	Nov. 2023
Adapting Scaffolding to Support Knowledge Consumption through Interactive AI-Driven Systems	
<i>Invited Talk at UCSD Design Lab</i>	Oct. 2023