

RESEARCH INTEREST

My research interest falls in the intersection of **human-AI interaction (HAI)** and **natural language processing (NLP)**, with a focus on aligning AI systems with human cognitive processes to make them more adaptive, interpretable, and human-centered. Specifically, I (1) develop AI systems that interactively adapt outputs to individual users by modeling cognitive processes based on users' tasks and contexts, and (2) design evaluation methods to assess how effectively AI systems can generate outputs aligned with human cognitive processes.

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 Scientist Intern, Semantic Scholar Team

Mentor: Pao Sianglihue, Joseph Chee Chang, Jonathan Bragg, Kyle Lo

Seattle, WA, USA

May - Oct. 2023

[C10, C12]

LG AI Research

Research Scientist 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 (Applicational 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

University of California, Davis

Exchange student in Mathematics

Davis, CA, USA

Sept. 2015 – Feb. 2016

PUBLICATIONS

Conference and Journal Papers

[C16] 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

[C15] 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

[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

Conference Papers in Submission (under review)

[U1] EVALET: Evaluating Large Language Models by Fragmenting Outputs into Functions

Tae Soo Kim*, Heechan Lee*, **Yoonjoo Lee**, Young-Ho Kim, Juho Kim

Under Review, 2025

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: Proceedings of the 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

MENTORING EXPERIENCE

Yubin Choi , PhD student, University of Michigan	Fall 2025 - current
Heechan Lee , Undergrad student, KAIST >> Master's student, KAIST	Summer 2024 - current
Yoonah Park , Undergrad student, Seoul National University	Winter 2023 - current
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

INVITED TALKS

Invited Talk at Purdue University	Apr. 2025
<i>Title: Adaptive Knowledge Understanding Support: Aligning AI Systems with Human Cognitive Processes</i>	
Invited Talk at Pennsylvania State University	March 2025
<i>Title: Adaptive Knowledge Understanding Support: Aligning AI Systems with Human Cognitive Processes</i>	
Invited Talk at Allen Institute for Artificial Intelligence (AI2)	March 2025
<i>Title: Personalized Knowledge Understanding Support: Aligning AI Systems with Human Cognitive Processes</i>	
Invited Talk at Apple	March 2025
<i>Title: Personalized Knowledge Understanding Support: Aligning AI Systems with Human Cognitive Processes</i>	
Invited Talk at University of Pennsylvania	Feb. 2025
<i>Title: Personalized Knowledge Understanding Support: Aligning AI Systems with How Humans Understand Knowledge</i>	
Invited Talk at Center for Human-Computer Interaction at Virginia Tech	Jan. 2025
<i>Title: Personalized Knowledge Understanding Support: Aligning AI Systems with How Humans Understand Knowledge</i>	
Guest Lecture at KAIST CS475 ML for NLP	Dec. 2024
<i>Title: Data Use in LLMs and Human-centered Evaluation</i>	
Invited Talk at Google Explore CSR Journey of Research Workshop 2024	Nov. 2024
<i>Title: Personalized Knowledge Understanding Support: Aligning AI with How Humans Understand Knowledge</i>	
Invited Talk at HCI KOREA 2024: SIGCHI-Sponsored Top Conferences Session	Jan. 2024
<i>Title: DAPIE: Interactive Step-by-step Explanatory Dialogues to Answer Children's Why and How Questions</i>	
Technical Talk at NAVER AI LAB	Nov. 2023
<i>Title: Creating Interactive Dialogues to Answer Children's Why and How Questions</i>	
Invited Talk at UCSD Design Lab	Oct. 2023
<i>Title: Adapting Scaffolding to Support Knowledge Consumption through Interactive AI-Driven Systems</i>	

PROFESSIONAL SERVICES

Program Committee

- CHI 2026 (Associate Chair)
- CHI LBW 2023

Workshop Organizer

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

Reviewer

- ACM CHI '22-'25, UIST '22-'25, IUI '25, CSCW '23, C&C '22-'24, IEEE TLT '22
- ICLR '25, EMNLP '23-'25, ACL '23

Student Volunteer*CHI 2022***TEACHING EXPERIENCE**

Introduction to Algorithms*KAIST CS300 Teaching Assistant, Instructor: Sunghee Choi*

Spring 2024

Introduction to Data Science*KAIST CS492 Teaching Assistant, Instructor: Jaegil Lee*

Spring 2022

Introduction to Social Computing*KAIST CS473 Teaching Assistant, Instructor: Juho Kim*

Fall 2020, Fall 2021

Time Series Analysis*Ewha Womans University, Teaching Assistant, Instructor: Dongwan Shin*

Spring 2019

Regression Analysis*Ewha Womans University, Teaching Assistant, Instructor: Donghwan Lee*

Fall 2018

HONORS, AWARDS, AND SCHOLARSHIPS

MIDAS Postdoctoral Affiliate, Michigan Institute for Data and AI in Society (MIDAS)*University of Michigan — Selected as one of up to 10 postdoctoral researchers*

2025

Best Presentation Award from SIGCHI Invited Papers Session*SIGCHI Korea Local Chapter*

2024

Research Assistant Scholarship*College of Natural Sciences, Ewha Womans University*

2019

Honors Scholarship*College of Education, Ewha Womans University*

2014, 2015, 2016, 2017

Dean's List*College of Education, Ewha Womans University*

2014, 2015, 2016, 2017