YOONJOO LEE

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RESEARCH INTEREST

My research interest lies 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.

EMPLOYMENT EXPERIENCE

Adobe Research   **San Jose, CA, USA**
Research Intern, Document Intelligence Lab   May - Sept. 2024
Mentor: Alexa F Siu, Tong Sun   [U1]

Allen Institute for Artificial Intelligence (AI2)   **Seattle, WA, USA**
Research Scientist Intern, Semantic Scholar Team   May - Oct. 2023
Mentor: Pao Siangliulue, Joseph Chee Chang, Jonathan Bragg, Kyle Lo   [C10, C12]

LG AI Research   **Seoul, Republic of Korea**
Research Scientist Intern, Advanced Machine Learning Lab   Nov. 2022 – Mar. 2023
Mentor: Moontae Lee, Kyungjae Lee   [C6]

Electronics and Telecommunications Research Institute (ETRI)   **Daejeon, Republic of Korea**
Graduate Research Assistant, Data Sciences Group   Mar. 2018 – Dec. 2019
Mentor: Yunbae Kim, Seungken Park   [P1, P2, C1, C2]

EDUCATION

KAIST   **Daejeon, Republic of Korea**
    Ph.D. Candidate in Computer Science. Advisor: Juho Kim   Sep. 2020 – Present

Ewha Womans University   **Seoul, Republic of Korea**
    M.S. in Statistics (Applicational Statistics). Advisor: Dongwan Shin   Mar. 2018 – Feb. 2020
    B.S. Major in Mathematics Education, Minor in Statistics; *Magna Cum Laude*   Mar. 2014 – Feb. 2018

University of California, Davis   **Davis, CA, USA**
    Exchange student in Mathematics   Sep. 2015 – Feb. 2016

PUBLICATIONS

Conference Papers in Submission (under review)

[C15] Benchmarking Model Ability to Predict Preferences from Interactions

    Tae Soo Kim, **Yoonjoo Lee** et al.

    Under Review, 2025

[C14] 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

    Under Review, 2025

Conference and Journal Papers

[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: In 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: In 2025 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies, **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: In 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: In 2024 CHI 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: In 2024 CHI 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: In 2024 CHI 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: In 40th 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: In 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: In 2023 CHI 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: In 2022 CHI 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: In 2021 CHI 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: In 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

Heechan Lee, Undergrad 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 April 2025
Title: Adaptive Knowledge Understanding Support: Aligning AI Systems with Human Cognitive Processes

Invited Talk at Pennsylvania State University March 2025
Title: Adaptive Knowledge Understanding Support: Aligning AI Systems with Human Cognitive Processes

Invited Talk at Allen Institute for Artificial Intelligence (AI2) March 2025
Title: Personalized Knowledge Understanding Support: Aligning AI Systems with Human Cognitive Processes

Invited Talk at Apple March 2025
Title: Personalized Knowledge Understanding Support: Aligning AI Systems with Human Cognitive Processes

Invited Talk at University of Pennsylvania Feb. 2025
Title: Personalized Knowledge Understanding Support: Aligning AI Systems with How Humans Understand Knowledge

Invited Talk at Center for Human-Computer Interaction at Virginia Tech Jan. 2025
Title: Personalized Knowledge Understanding Support: Aligning AI Systems with How Humans Understand Knowledge

Guest Lecture at KAIST CS475 ML for NLP Dec. 2024
Title: Data Use in LLMs and Human-centered Evaluation

Invited Talk at Google Explore CSR Journey of Research Workshop 2024 Nov. 2024
Title: Personalized Knowledge Understanding Support: Aligning AI with How Humans Understand Knowledge

Invited Talk at HCI KOREA 2024: SIGCHI-Sponsored Top Conferences Session Jan. 2024
Title: DAPIE: Interactive Step-by-step Explanatory Dialogues to Answer Children's Why and How Questions

Technical Talk at NAVER AI LAB Nov. 2023
Title: Creating Interactive Dialogues to Answer Children's Why and How Questions

Invited Talk at UCSD Design Lab Oct. 2023
Title: Adapting Scaffolding to Support Knowledge Consumption through Interactive AI-Driven Systems

PROFESSIONAL SERVICES

Program Committee
● CHI LBW 2023

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

Reviewer
● CHI 2022, 2023, 2024, 2025
● UIST 2022, 2023, 2024
● ICLR 2025
● EMNLP 2023
● ACL 2023
● IUI 2025
● CSCW 2023
● C&C 2022, 2024
● IEEE Transactions on Learning Technologies

Student Volunteer
CHI 2022

Teaching Experience

Introduction to Algorithms   Spring 2024
KAIST CS300 Teaching Assistant, Instructor: Sunghee Choi

Introduction to Data Science   Spring 2022
KAIST CS492 Teaching Assistant, Instructor: Jaegil Lee

Introduction to Social Computing   Fall 2020, Fall 2021
KAIST CS473 Teaching Assistant, Instructor: Juho Kim

Time Series Analysis   Spring 2019
Ewha Womans University, Teaching Assistant, Instructor: Dongwan Shin

Regression Analysis   Fall 2018
Ewha Womans University, Teaching Assistant, Instructor: Donghwan Lee

Honors, Awards, and Scholarships

Best Presentation Award from SIGCHI Invited Papers Session   2024
SIGCHI Korea Local Chapter

Research Assistant Scholarship   2019
College of Natural Sciences, Ewha Womans University

Honors Scholarship   2014, 2015, 2016, 2017
College of Education, Ewha Womans University

Dean's List   2014, 2015, 2016, 2017
College of Education, Ewha Womans University

Ewha Womans University Alumnae Association Scholarship   2017
College of Education, Ewha Womans University

References

Juho Kim   Associate Professor
School of Computing   *KAIST*
juhokim@kaist.ac.kr

Daniel S. Weld   Professor Emeritus
Paul G. Allen School of Computer Science & Engineering   *University of Washington*
weld@cs.washington.edu

Eytan Adar   Associate Professor
Information, School, Electrical Engineering and Computer Science   *University of Michigan*
eadar@umich.edu

Moontae Lee   Assistant Professor
Department of Information and Decision Sciences   *University of Illinois at Urbana-Champaign*
moontae@uic.edu