

RESEARCH INTEREST

My research interest lies in the intersection of **human-computer interaction (HCI)** and **natural language processing (NLP)**. I focus on exploring how **AI systems can interact with individuals to tailor knowledge to their unique needs**. Specifically, I design human-AI interactive systems for personalized knowledge consumption and evaluate how effectively AI models can adapt knowledge to align with diverse user requirements.

EMPLOYMENT EXPERIENCE

Adobe Research <i>Research Intern, Document Intelligence Lab</i> <i>Mentor: Alexa F Siu, Tong Sun</i>	San Jose, CA, USA May - Sept. 2024 [U1]
Allen Institute for Artificial Intelligence (AI2) <i>Research Scientist Intern, Semantic Scholar Team</i> <i>Mentor: Pao Siangliulue, Joseph Chee Chang, Jonathan Bragg, Kyle Lo</i>	Seattle, WA, USA May - Oct. 2023 [C10, C12]
LG AI Research <i>Research Scientist Intern, Advanced Machine Learning Lab</i> <i>Mentor: Moontae Lee, Kyungjae Lee</i>	Seoul, Republic of Korea Nov. 2022 – Mar. 2023 [C6]
KIXLAB, KAIST <i>Graduate Research Intern</i> <i>Mentor: Juho Kim, Jean Y. Song</i>	Daejeon, Republic of Korea Mar. 2020 – Aug. 2020
Electronics and Telecommunications Research Institute (ETRI) <i>Graduate Research Assistant, Data Sciences Group</i> <i>Mentor: Yunbae Kim, Seungken Park</i>	Daejeon, Republic of Korea Mar. 2018 – Dec. 2019 [P1, P2, C1, C2]

EDUCATION

KAIST Ph.D. Candidate in Computer Science. Advisor: Juho Kim	Daejeon, Republic of Korea Sep. 2020 – Present
Ewha Womans University M.S. in Statistics (Applicational Statistics). Advisor: Dongwan Shin B.S. Major in Mathematics Education, Minor in Statistics; <i>Magna Cum Laude</i>	Seoul, Republic of Korea Mar. 2018 – Feb. 2020 Mar. 2014 – Feb. 2018
University of California, Davis Exchange student in Mathematics	Davis, CA, USA Sep. 2015 – Feb. 2016

PUBLICATIONS

Conference and Journal Papers

[C12] 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.

- [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

Conference Papers in Submission (under review)

[U2] 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

Under Review, 2024

[U1] 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

Under Review, 2024

Posters and Workshop Papers

[P6] 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

[P5] 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

[P4] 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

[P3] 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

[P2] A Study on the Distribution Analysis of LTE Resource Block Usage from TSME Measurement Data

Yoonjoo Lee, Yunbae Kim, Seungken Park

KICS, Jun. 2018

[P1] A Study on the Estimation of Probability Distribution of the Spectral Efficiency of LTE based on TSME Measurement Data

Yunbae Kim, **Yoonjoo Lee**, 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. Adobe Research. Filed 2024.

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

INVITED TALKS

- 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
- Allen Institute for Artificial Intelligence (AI2)** June 2024
Title: Personalized Knowledge Understanding Support: Aligning AI Agents 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

HONORS, AWARDS, AND SCHOLARSHIPS

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
Ewha Womans University Alumnae Association Scholarship <i>College of Education, Ewha Womans University</i>	2017