

# YOONJOO LEE

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## RESEARCH INTEREST

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My research interest lies in the intersection of human-computer interaction (HCI) and natural language processing (NLP). I aim to support adaptive and personalized language design by structuring the information embedded in language in a way that aligns with human cognition, characteristics, and behavior. Through these structures, I seek to enable AI models to understand individual users in relation to language and to then generate language that is more suited to their states and needs.

## EDUCATION

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### 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; *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

Sep. 2015 – Feb. 2016

## RESEARCH EXPERIENCE

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### Adobe Research

Research Intern, Document Intelligence Lab

Mentor: Alexa F Siu, Tong Sun

San Jose, US

May 2024 ~ Present

### Allen Institute for AI (AI2)

Research Scientist Intern, Semantic Scholar Team

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

Seattle, US

May - Oct. 2023

[C10]

### LG AI Research

Research Scientist Intern, Advanced Machine Learning Lab

Mentor: Moontae Lee, Kyungjae Lee

Seoul, Republic of Korea

Nov. 2022 – Mar. 2023

[C6]

### KIXLAB, KAIST

Graduate Research Intern

Mentor: Juho Kim, Jean Y. Song

Daejeon, Republic of Korea

Mar. 2020 – Aug. 2020

### 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]

## PUBLICATIONS

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### Conference and Journal Papers

[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

Accepted in FAccT 2024

**[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: Proceedings of the 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: Proceedings of the 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: Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems.*

**[C7] QASA: Advanced Question Answering on Scientific Articles**

**Yoonjoo Lee**<sup>\*</sup>, Kyungjae Lee<sup>\*</sup>, Sunghyun Park, Dasol Hwang, Jaehyeon Kim, Hong-in Lee, Moontae Lee  
*ICML 2023: Proceedings of the 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: Proceedings of the 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: Proceedings of the 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: Proceedings of the 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: Proceedings of the 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*

**Posters and Workshop Papers**

**[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*

**ACADEMIC SERVICES**

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**Program Committee**

- CHI LBW 2023

**Workshop Organizing Committee**

- 2024 ACL Scholarly Document Processing Workshop

**Reviewer**

- EMNLP 2023
- CHI 2024, 2023, 2022
- UIST 2022, 2023, 2024
- ACL 2023
- CSCW 2023
- C&C 2022, 2024
- IEEE Transactions on Learning Technologies

**Student Volunteer**

*CHI 2022*

**TEACHING**

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**Introduction to Algorithms**

*KAIST CS300, Instructor: Sunghee Choi*

Spring 2024

**Introduction to Data Science**

*KAIST CS492, Instructor: Jaegil Lee*

Spring 2022

**Introduction to Social Computing**

*KAIST CS473, Instructor: Juho Kim*

Fall 2020, Fall 2021

**Time Series Analysis**

*Ewha Womans University, Instructor: Dongwan Shin*

Spring 2019

**Regression Analysis**

*Ewha Womans University, Instructor: Donghwan Lee*

Fall 2018

## **INVITED TALKS**

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- 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*

## **HONORS, AWARDS, AND SCHOLARSHIPS**

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- Best Presentation Award from SIGCHI Invited Papers Session** 2024  
*SIGCHI Korea Local Chapter*
- Research Assistant Scholarship** 2019  
*College of Natural Sciences, Ewha Womans University*
- Admission Scholarship** 2018  
*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*

## **SERVICE AND LEADERSHIP**

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- KAIST-Google ExploreCSR** 2022  
*Student Organizer*
- Programming Mentoring** 2016 – 2017  
*Leader of Student Organizer*