# YOONJOO LEE

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## RESEARCH INTEREST

My research interest lies in the intersection of human-computer interaction (**HCI**) and natural language processing (**NLP**). I aim to support people to learn from and make sense of dense information (e.g., content in lecture videos and scientific articles) by structuring the information in the context to create adaptive scaffoldings (e.g., QAs, dialogues, explanations) using AI models.

## 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      Mar. 2014 – Feb. 2018
Graduated with Honors (*Magna Cum Laude*)

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

## PUBLICATIONS

### Conference and Journal Papers

**[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: 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 (to appear).*

**[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*

## Preprints

**[A1]** **EvalLM: Interactive Evaluation of Large Language Model Prompts on User-Defined Criteria**

Tae Soo Kim, **Yoonjoo Lee**, Jamin Shin, Young-Ho Kim, Juho Kim

*Under Review, 2023*

## 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*

## RESEARCH EXPERIENCE

**Allen Institute for AI (AI2)** — **Seattle, US**
*Research Scientist Intern, Semantic Scholar Team* — May - Oct. 2023
*Mentor:* Pao Siangliulue, Joseph Chee Chang, Jonathan Bragg, Kyle Lo

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

**KIXLAB, KAIST** — **Daejeon, Republic of Korea**
*Graduate Research Intern* — Mar. 2020 – Aug. 2020
*Mentor:* Juho Kim, Jean Y. Song

**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]

## TEACHING

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

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

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


## ACADEMIC SERVICES

**Program Committee**
- CHI LBW 2023

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

**Student Volunteer**
*CHI 2022*


## INVITED TALKS

**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*

**Invited Talk at University of Washington**                                  Oct. 2023
*Title: Adapting Scaffolding to Support Knowledge Consumption through Interactive AI-Driven Systems*


## HONORS, AWARDS, AND SCHOLARSHIPS

**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

**KAIST-Google ExploreCSR**                                                                 2022
*Student Organizer*

**Programming Mentoring**                                                              2016 – 2017
*Leader of Student Organizer*