YOONJOO LEE

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RESEARCH INTEREST

My research interest lies in the intersection of human-computer interaction (HCI), natural language processing (NLP), and Education. I aim to support people to learn from and understand information-dense text (e.g., lecture transcript, scientific article) by structuring the information in the context to create conversational questions and answers to scaffold people's understanding.

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

[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

RESEARCH EXPERIENCE

LG AI Research **Seoul, Republic of Korea**
Research Scientist Intern, Advanced Machine Learning Lab Nov. 2022 – March. 2023
- Designed a schema for questions triggered from academic paper by adapting prior literature in education to a paper reading context.
- Collected various advanced questions based on the proposed schema from academic paper readers [under submission].

KIXLAB, KAIST **Daejeon, Republic of Korea**
Graduate Research Intern Mar. 2020 – Aug. 2020
- Investigated user experiences with VR services by analyzing large-scale text data using various techniques like clustering, topic modeling, and sentiment analysis.

Electronics and Telecommunications Research Institute (ETRI) **Daejeon, Republic of Korea**
Graduate Research Assistant, Data Sciences Group Mar. 2018 – Dec. 2019
- Performed analysis of Spectral Efficiency for LTE with probabilistic modeling and Deep Neural Networks. [P1, C1, C2]
- Participated in research about predicting future Resource Block Usage by applying stochastic modeling and Recurrent Neural Networks. [P2]

Undergraduate Research Intern, Data Sciences Group Jan. 2018 – Feb. 2018
- Devised a module for pre-processing and summarizing mobile traffic data in Python.

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

SERVICES

Program Committee
- CHI LBW 2023

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

Student Volunteer
CHI 2022

KAIST-Google ExploreCSR 2022 – Present
Student Organizer

Programming Mentoring 2016 – 2017
Leader of Student Organizer

Mathematics Mentoring in Ewha Girls High School 2015 – 2017
Mentor

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