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 perform tasks ranging from teaching to writing effectively by 1) building AI-powered systems with humans in the loop and 2) expanding and adapting large-scale data and models to fit specific user tasks. Specifically, one of my research goals is to create computational methods and systems that support scalable teaching and learning using human-AI collaboration.

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

[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. To appear.

[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

[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

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

PATENTS

Domestic Patent: "Apparatus and Method for Stochastic Analysis of Spectral Efficiency and Transmission Rate of LTE"

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

Reviewer
CHI 2022, C&C 2022, IEEE Transactions on Learning Technologies   2021 – Present

Last Updated: May 9, 2022

Student Volunteer 2021
CHI 2022

KAIST-Google ExploreCSR 2022 – Present
Student Organizer

Programming Mentoring 2016 – 2017
Leader of Student Organizer

Mathematics Mentoring in Ewha Girl's 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