

Sunkyung Lee

Sungkyunkwan University, Suwon-si, Gyeonggi-do, Republic of Korea
☎ +82-10-4874-1505 | ✉ sk1027@skku.edu | 📷 sklee | 🌐 sunkyunglee

Research Interests

I am primarily interested in Information Retrieval, especially focusing on sparse retrieval and generative retrieval. My research interests lie in the fields of data mining and natural language processing in real-world applications.

Education

Sungkyunkwan University

PH.D., DEPARTMENT OF ARTIFICIAL INTELLIGENCE

- Advisor: Prof. Jongwuk Lee

Republic of Korea

Mar 2023 – present

Sungkyunkwan University

M.S., DEPARTMENT OF ARTIFICIAL INTELLIGENCE

- Thesis: A Dual Document Encoder Based on Sparse Representations for First-stage Retrieval
- Advisor: Prof. Jongwuk Lee
- GPA: 4.02 / 4.5

Republic of Korea

Mar 2021 – Feb 2023

Sungkyunkwan University

B.S., DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

- Project: Data Augmentation Methods for Improving the Performance of Machine Reading Comprehension
- Advisor: Prof. Jongwuk Lee
- GPA: 4.02 / 4.5

Republic of Korea

Mar 2017 – Feb 2021

B.A., DEPARTMENT OF GLOBAL ECONOMICS

- GPA: 3.78 / 4.5

Mar 2017 – Feb 2021

Publications

INTERNATIONAL CONFERENCES

Sunkyung Lee*, Minjin Choi*, Jongwuk Lee, GLEN: Generative Retrieval via Lexical Index Learning. The 2023 Conference on Empirical Methods in Natural Language Processing (EMNLP). 2023 (* : equal contribution)

Hye-young Kim*, Minjin Choi*, **Sunkyung Lee**, Eunseong Choi, Young-In Song, Jongwuk Lee, ConQueR: Contextualized Query Reduction using Search Logs. The 46th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR, short paper). 2023 (* : equal contribution)

Eunseong Choi*, **Sunkyung Lee***, Minjin Choi, Hyeseon Ko, Young-In Song, Jongwuk Lee, SpaDE: Improving Sparse Representations using a Dual Document Encoder for First-stage Retrieval, *In Proceedings of the 31st ACM International Conference on Information and Knowledge Management (CIKM)*, 2022 (*: equal contribution)

Minjin Choi, **Sunkyung Lee**, Eunseong Choi, Heesoo Park, Junhyuk Lee, Dongwon Lee, Jongwuk Lee, MeLBERT: Metaphor Detection via Contextualized Late Interaction using Metaphorical Identification Theories, *Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*, 2021

DOMESTIC CONFERENCES

Jiwoo Kim, **Sunkyung Lee**, Eunseong Choi, and Jongwuk Lee. Pseudo-sentence Representation for Math Word Solving Problem. *Korea Computer Congress (KCC)*, 2022 (Best presentation paper)

Sunkyung Lee, Seonho Jeong, Jongwuk Lee, Data Augmentation Methods for Improving the Performance of Machine Reading Comprehension, *Korea Software Congress (KSC)*, 2020 (Best paper)

DOMESTIC JOURNALS

Professional Experience

2021 **Research Intern**, NAVER Search CIC, NAVER Corp., Republic of Korea

Honors and Awards

2023	4th place (Minister Award) , 6th AI Grand Challenge Stage I: Policy Support AI	IITP
2022	1st place (Minister Award) , 5th AI Grand Challenge Stage III: Math Word Problem Solving	IITP
2022	Best Presentation Paper Award , Korea Computer Congress	KIISE
2021	Grand Prize (2nd prize) , SKKU Graduate Student Paper Awards (2/200 teams)	SKKU
2021	3rd Prize (Minister Award) , 5th AI Grand Challenge Stage II: Math Word Problem Solving	IITP
2020	Best Paper Award , Korea Software Congress	KIISE

Scholarships

2023-2025 **Daesang Foundation Scholarship**, Daesang Foundation, Republic of Korea
 2021-2023 **Graduate School Scholarship**, Sungkyunkwan University, Republic of Korea

Presentations

SKKU AI Colloquium 2023

Suwon-si, Republic of Korea

PRESENTER IN POSTER SESSION

Sep. 2023

- Introduced the paper "SpaDE: Improving Sparse Representations using a Dual Document Encoder for First-stage Retrieval", CIKM (2022)

Korea Software Congress 2022

Jeju, Republic of Korea

PRESENTER IN TOP CONFERENCE SESSION (ORAL)

Dec. 2022

- Introduced the paper "SpaDE: Improving Sparse Representations using a Dual Document Encoder for First-stage Retrieval", CIKM (2022)

Teaching Experience

REGULAR COURSES

2023	Introduction to Recommender Systems , Teaching Assistant	SKKU
2022	Fundamentals of Machine Learning , Teaching Assistant	SKKU
2021	Fundamentals of Machine Learning , Teaching Assistant	SKKU
2022	Introduction to Database , Teaching Assistant	SKKU
2021	Introduction to Database , Teaching Assistant	SKKU

EXTRACURRICULAR COURSES

2022	Machine Learning, Manufacture AI Leader Course, LG Electronics , Teaching Assistant
2022	Machine Learning, Software Architecture Course, Samsung SDS , Teaching Assistant
2021	Machine Learning, Manufacture AI Leader Course, LG Electronics , Teaching Assistant

Reference

Jongwuk Lee, Associate professor, Sungkyunkwan University, jongwuklee@skku.edu