Jun 2025 - Sep 2025

Homepage: https://starsuzi.github.io Email: starsuzi@kaist.ac.kr Google Scholar: /Soyeong Jeong

RESEARCH INTEREST

My research interests are mainly on Retrieval-Augmented Generation (RAG) for solving open-domain language tasks and interpretation of Large Language Models (LLMs) to enhance their interpretability in real-world applications. Not limited to, I am interested in broad topics on natural language understanding.

KAIST EDUCATION Daejeon, Korea

> Ph.D. in Graduate school of AI (Advisor: Prof. Sung Ju Hwang) Mar 2022 - Present M.S. in School of Computing Mar 2020 - Feb 2022

Thesis: Information Retrieval by Augmenting Document Representation

Korea University Seoul, Korea

B.S. in Computer Science and Engineering (Graduated with Honor) Mar 2016 - Feb 2020

B.E. in Software Technology and Enterprise Program (Interdisciplinary Program)

Anyang Foreign Language High School Anyang, Korea

Prestigious high school for talented students (Major in English) Mar 2013 - Feb 2016

EMPLOYMENT Applied Scientist Intern, Amazon

Conducting research on LLMs and their general intelligence.

Applied Scientist Intern, Amazon Jul 2024 - Oct 2024 Conducted research on an LLM-powered multi-agent framework for conversational tasks.

Undergrad. Research Assistant, Korea University (Advisor: Prof. Jaewoo Kang) Mar 2019 - Feb 2020

Participated in the major recommendation project by embedding curriculum vectors.

Research Intern, Seoul SW-SoC Convergence R&BD Center, ETRI Jul 2019 - Aug 2019

• Participated in the Speech Emotion Recognition project.

Research Intern, Artificial Intelligence Research Laboratory, ETRI Jan 2019 - Feb 2019

• Participated in the Artificial Social Intelligence for Human-Care Robots project.

PUBLICATIONS International Publications

- [36] Adaptive Multi-Agent Response Refinement in Conversational Systems Soyeong Jeong, Aparna Elangovan, Emine Yilmaz, and Oleg Rokhlenko Under review
- [35] UniversalRAG: Retrieval-Augmented Generation over Multiple Corpora with Diverse Modalities and Granularities Woongyeong Yeo*, Kangsan Kim*, Soyeong Jeong, Jinheon Baek, and Sung Ju Hwang Under review
- [34] PRISM: Fine-Grained Paper-to-Paper Retrieval with Multi-Aspect-Aware Query Optimization Sangwoo Park, Jinheon Baek, Soyeong Jeong, and Sung Ju Hwang Under review
- [33] Database-Augmented Query Representation for Information Retrieval Soyeong Jeong, Jinheon Baek, Sukmin Cho, Sung Ju Hwang, and Jong C. Park Empirical Methods in Natural Language Processing (EMNLP), 2025.
- [32] The RAG Paradox: A Black-Box Attack Exploiting Unintentional Vulnerabilities in Retrieval-Augmented Generation Systems Chanwoo Choi, Jinsoo Kim, Sukmin Cho, Soyeong Jeong, and Buru Chang Findings of the Empirical Methods in Natural Language Processing (Findings of EMNLP), 2025.
- [31] CaMMT: Benchmarking Culturally Aware Multimodal Machine Translation Emilio Villa-Cueva, Sholpan Bolatzhanova, Diana Turmakhan, Kareem Elzeky..., Jinheon Baek, ..., Soyeong Jeong, ..., Injy Hamed, Atnafu Lambebo Tonja, and Thamar Solorio Findings of the Empirical Methods in Natural Language Processing (Findings of EMNLP), 2025.
- [30] Upcycling Candidate Tokens of Large Language Models for Query Expansion Jinseok Kim, Sukmin Cho, Soyeong Jeong, Sangyeop Kim, and Sungzoon Cho The Conference on Information and Knowledge Management (CIKM), 2025.

- [29] VideoRAG: Retrieval-Augmented Generation over Video Corpus Soyeong Jeong*, Kangsan Kim*, Jinheon Baek*, and Sung Ju Hwang Findings of the Association for Computational Linguistics (Findings of ACL), 2025.
- [28] EXIT: Context-Aware Extractive Compression for Enhancing Retrieval-Augmented Generation Taeho Hwang, Sukmin Cho, <u>Soyeong Jeong</u>, Hoyun Song, SeungYoon Han, and Jong C. Park Findings of the Association for Computational Linguistics (Findings of ACL), 2025.
- [27] Temporal Information Retrieval via Time-Specifier Model Merging SeungYoon Han, Taeho Hwang, Sukmin Cho, <u>Soyeong Jeong</u>, Hoyun Song, Huije Lee, and Jong C. Park Towards Knowledgeable Foundation Models Workshop at ACL (**KnowFM @ ACL**), 2025.
- [26] Unified Multi-Modal Interleaved Document Representation for Information Retrieval Jaewoo Lee*, Joonho Ko*, Jinheon Baek*, <u>Soyeong Jeong</u>, and Sung Ju Hwang Vector Databases Workshop at ICML (**VecDB @ ICML**), 2025.
- [25] Lossless Acceleration of Large Language Models with Hierarchical Drafting based on Temporal Locality in Speculative Decoding Sukmin Cho, Sangjin Choi, Taeho Hwang, Jeongyeon Seo, Soyeong Jeong, Huije Lee, Hoyun Song, Jong C. Park, and Youngjin Kwon Findings of the Nations of the Americas Chapter of the Association for Computational Linguistics (Findings of NAACL), 2025.
- [24] CVQA: Culturally-diverse Multilingual Visual Question Answering Benchmark
 David Romero, Chenyang Lyu, Haryo Akbarianto Wibowo, Teresa Lynn, Injy Hamed,
 Aditya Nanda Kishore, ..., Jinheon Baek, ..., Soyeong Jeong, ..., Thamar Solorio, and Alham Fikri Aji
 Neural Information Processing Systems Datasets and Benchmarks Track (NeurIPS D&B), 2024. (Oral)
- [23] Typos that Broke the RAG's Back: Genetic Attack on RAG Pipeline by Simulating Documents in the Wild via Low-level Perturbations Sukmin Cho, <u>Soyeong Jeong</u>, Jeongyeon Seo, Taeho Hwang, and Jong C. Park Findings of the Empirical Methods in Natural Language Processing (Findings of EMNLP), 2024.
- [22] Ask LLMs Directly, "What shapes your bias?": Measuring Social Bias in Large Language Models Jisu Shin, Hoyun Song, Huije Lee, <u>Soyeong Jeong</u>, and Jong C. Park Findings of the Association for Computational Linguistics (Findings of ACL), 2024.
- [21] DSLR: Document Refinement with Sentence-Level Re-ranking and Reconstruction to Enhance Retrieval-Augmented Generation Taeho Hwang, <u>Soyeong Jeong</u>, Sukmin Cho, SeungYoon Han, and Jong C. Park Knowledge Augmented Methods for NLP Workshop at ACL (KnowledgeNLP @ ACL), 2024.
- [20] Adaptive-RAG: Learning to Adapt Retrieval-Augmented Large Language Models through Question Complexity <u>Soyeong Jeong</u>, Jinheon Baek, Sukmin Cho, Sung Ju Hwang, and Jong C. Park North American Chapter of the Association for Computational Linguistics (NAACL), 2024.
- [19] Self-Knowledge Distillation for Learning Ambiguity Hancheol Park, <u>Soyeong Jeong</u>, Sukmin Cho, and Jong C. Park arXiv preprint, 2024
- [18] Test-Time Self-Adaptive Small Language Models for Question Answering
 Soyeong Jeong, Jinheon Baek, Sukmin Cho, Sung Ju Hwang, and Jong C. Park
 Findings of the Empirical Methods in Natural Language Processing (Findings of EMNLP), 2023.
- [17] Knowledge-Augmented Language Model Verification Jinheon Baek, <u>Soyeong Jeong</u>, Minki Kang, Jong C. Park, and Sung Ju Hwang Empirical Methods in Natural Language Processing (EMNLP), 2023.
- [16] Improving Zero-shot Reader by Reducing Distractions from Irrelevant Documents in Open-Domain Question Answering Sukmin Cho, Jeongyeon Seo, <u>Soyeong Jeong</u>, Jong C. Park Findings of the Empirical Methods in Natural Language Processing (Findings of EMNLP), 2023.

- [15] Phrase Retrieval for Open-Domain Conversational Question Answering with Conversational Dependency Modeling via Contrastive Learning <u>Soyeong Jeong</u>, Jinheon Baek, Sung Ju Hwang, and Jong C. Park Findings of the Association for Computational Linguistics (Findings of ACL), 2023.
- [14] Discrete Prompt Optimization via Constrained Generation for Zero-shot Re-ranker Sukmin Cho, <u>Soyeong Jeong</u>, Jeong yeon Seo, Jong C. Park Findings of Association for Computational Linguistics (Findings of ACL), 2023.
- [13] Realistic Conversational Question Answering with Answer Selection based on Calibrated Confidence and Uncertainty Measurement <u>Soyeong Jeong</u>, Jinheon Baek, Sung Ju Hwang, and Jong C. Park Conference of the European Chapter of the Association for Computational Linguistics (EACL), 2023.
- [12] Augmenting Document Representations for Dense Retrieval with Interpolation and Perturbation Soyeong Jeong, Jinheon Baek, Sukmin Cho, Sung Ju Hwang, and Jong C. Park Annual Meeting of the Association for Computational Linguistics (ACL), 2022. (Oral)
- [11] Query Generation with External Knowledge for Dense Retrieval Sukmin Cho, <u>Soyeong Jeong</u>, Wonsuk Yang, Jong C. Park Deep Learning Inside Out Workshop at ACL (**DeeLIO @ ACL**), 2022.
- [10] Unsupervised Document Expansion for Information Retrieval with Stochastic Text Generation Soyeong Jeong, Jinheon Baek, ChaeHun Park, and Jong C. Park Scholarly Document Processing Workshop at NAACL (SDP @ NAACL), 2021. (Oral)
- [9] Development of Speech Emotion Recognition Algorithm using MFCC and Prosody Hyejin Koo, <u>Soyeong Jeong</u>, Sungjae Yoon, Wonjong Kim International Conference on Electronics, Information, and Communication (ICEIC), 2020.

Domestic Publications, mostly written in Korean

- [8] Retrieval-Augmented Generation through Zero-shot Sentence-Level Passage Refinement using LLMs Taeho Hwang, <u>Soyeong Jeong</u>, Sukmin Cho, and Jong C. Park Korea Computer Congress (KCC), 2024. (Best Paper)
- [7] Controllable prompt tuning with relation dependent tokens Jinseok Kim, Sukmin Cho, <u>Soyeong Jeong</u>, and Jong C. Park Korea Computer Congress (KCC), 2023.
- [6] Stopwords Mask Pooling for Dense Retrieval in Medical Domain Dongho Choi, Hoyun Song, <u>Soyeong Jeong</u>, Sukmin Cho, and Jong C. Park Korea Computer Congress (KCC), 2022. (Best Presentation)
- [5] Assessing automatic summarization model as a reading assistant Aujin Kim, Jisu Shin, <u>Soyeong Jeong</u>, Sukmin Cho, and Jong C. Park Korea Computer Congress (KCC), 2022.
- [4] Calibration of Pre-trained Language Model for the Korean Language Soyeong Jeong, Wonsuk Yang, ChaeHun Park, Jong C. Park Journal of KIISE (JOK), 2021.
- [3] Calibration of Pre-trained Language Model for Korean Soyeong Jeong, Wonsuk Yang, ChaeHun Park, Jong C. Park Human & Cognitive Language Technology (HCLT), 2020. (Best Paper)
- [2] Embedding Academic Majors and Lectures for Analyzing Departments in University Jinheon Baek, Gwanghoon Jang, <u>Soyeong Jeong</u>, Donghyeon Park, Kiwon Kwon, Jaewoo Kang Korea Computer Congress (KCC), 2019.

Thesis

 Information Retrieval by Augmenting Document Representation <u>Soyeong Jeong</u>
 Master's Thesis, KAIST, 2022

HONORS AND Awarded the Presidential Science Scholarship for Graduate Study	2025
Awards Selected as One of the Great Reviewers within ACL ARR 2025 Cycles	2025
Awarded a Ph.D. fellowship from NRF (National Research Foundation) of Korea	2023
Title: Realistic Open-domain Question Answering System with Large Language M	lodels
Received the Best Paper Award at HCLT 2020	2020
Graduated with Honor	2019
Computer Science and Engineering Department at Korea University	
Received the First Prize in the Graduation Project, Competition Among Around 20 Tea	ams 2019
Computer Science and Engineering Department at Korea University	
Nominated as Semester High Honors (Spring 2019)	2019
Nominated as Semester High Honors (Fall 2018)	2018
Received the Second Prize for the iOS Hackathon at Korea University	2018
Awarded as the Finalist, Competition of 21:1 with 735 total submissions	2017
LG Global Challenger	
ACADEMIC Reviewer of NeurIPS (Conference on Neural Information Processing Systems)	2025
Services Reviewer of COLM (Conference on Language Modeling)	2025
Reviewer of ACL ARR (Association for Computational Linguistics Rolling Review)	2023 - 2025
Reviewer of TALLIP (ACM Transactions on Asian and Low-Resource Language Information Pro	
Reviewer of ACL Demo Track	2021
10.10.10.10.10.2.2.0.110.1.100.1	
TALKS AND Towards Adaptive and Multimodal Retrieval-Augmented Generation	
SEMINARS Google ExploreCSR	Mar 2025
TEACHING Machine Learning (CS376)	
KAIST Spring 2024 (Teaching Assistant)	
Computational Linguistics (CS579)	
KAIST Fall 2022 (Teaching Assistant)	
Natural Language Processing with Python (CS372)	
KAIST Spring 2020, Spring 2021, Spring 2023 (Teaching Assistant)	
Skills Languages: Korean (mother tongue), English (fluent) Programming: Python, C, Java, Swift	