Hanseok Oh

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Research Interests

My main research goal is to build efficient knowledge stores and access systems that can be applied to real-world scenarios. Specifically, I am interested in (1) Retrieval systems that can handle complex conditions and multimodal data (2) how to efficiently manipulate representation space (3) Retrieval augmented Language model.

Education

Korea Advanced Institute of Science and Technology (KAIST) @ Seoul Korea   *Sep. 2021 - Feb. 2024*
M.S. in Artificial Intelligence
Graduate School of AI | Language & Knowledge Lab
Advisor: Minjoon Seo

SungKyunKwan University (SKKU) @ Seoul Korea   *Mar. 2014 - Aug.2020*
B.S. in Data Science & B.A. in Child and Adolescent Education
Cumulative GPA: 4.0 / 4.5

Selected Publication

INSTRUCTIR: A Benchmark for Instruction Following of Information Retrieval Models
Hanseok Oh, Hyunji Lee, Seonghyeon Ye, Haebin Shin, Hansol Jang, Changwook Jun, Minjoon Seo
Arxiv 2024 [paper]

Ktrl+F: Knowledge-Augmented In-Document Search
Hanseok Oh*, Haebin Shin*, Miyoung Ko, Hyunji Lee, Minjoon Seo
Arxiv 2023 [paper]

Nonparametric Decoding for Generative Retrieval
Hyunji Lee, Jaeyoung Kim, Hoyeon Chang, **Hanseok Oh**, Sohee Yang, Vlad Karpukhin, Yi Lu, Minjoon Seo″
ACL 2023 Findings [paper]

Structured Abstract Summarization of Scientific Articles: Summarization Using Full-text Section Information
Hanseok Oh, Seojin Nam, Yongjun Zhu
JASIST (2022) [paper]

Generative Multi-hop Retrieval
Hyunji Lee, Sohee Yang, **Hanseok Oh**, Minjoon Seo
EMNLP 2022 [paper]

ViSeRet: A simple yet effective approach to moment retrieval via fine-grained video segmentation
Aiden Seungjoon Lee, **Hanseok Oh**, Minjoon Seo
ICCV 2021 Workshop on Closing the Loop between Vision and Language (CLVL) [paper]
1st place at ICCV 2021 VALUE Challenge Retrieval Track [link]

Experience

LG AI *Sep.2023 - Feb. 2024*
Research Intern
Working on a retrieval system which can have instruction following ability.

Kakao Enterprise *Jul. 2020 - Oct. 2020*
Machine Learning Engineer Intern
Worked on large-scale knowledge graph representation learning. Derive insights from
large-scale knowledge graphs using Spark.

NAVER, NLP Software Developer *Mar. 2020 - Jun.2020*
Software Engineer Intern
Worked on an entity linking engine for the search system. I also extend the
Bi-encoder-based entity linking model, BLINK, one of the state-of-the-art entity linking
systems into the Korean version.

Undergraduate Research Program, KOFAC
Worked on a fake news detection model based on various machine learning and a word *Jan.2019 - Dec.2019*
representation method indicating authenticity.

Military Service
Served as a training assistant for the Republic of Korea Air Force Training Wing. *Sep. 2015 - Sep. 2017*

Honors and Awards

- 1st Place, VALUE Challenge Retrieval Track, ICCV 2021
- Korean News Summarization, 3rd prize & Peer evaluation prize, Sungkyunkwan University, Korea (Dec. 2019)
  - o Patent: Way to provide corporate news. Zhu, Oh, Park, Kim. Korean patent application 10-2020-0055691 (2020)
- Essay Generation using GPT-2, 3rd prize, Sungkyunkwan University, Korea (Nov.2019)
- Anomaly Detection using CCTV, 1st prize, Sungkyunkwan University, Korea (Jul.2019)
- KBO Baseball batting average prediction, 3rd prize, Dacon, Korea (Sep.2019)
- Academic Excellence Scholarship, Sungkyunkwan University, Korea (2019)