

# Hanseok Oh

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## Research Interests

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I am interested in building personalized assistants to aid user experiences for solving real-world problems by efficiently encoding, assessing, and leveraging knowledge. Specifically, I am interested in (1) Retrieval systems that can handle complex conditions and heterogeneous data (2) Retrieval augmented Language model, and (3) Building an Agent system that can plan and reason complex problems.

## Education

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**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

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The BiGGen Bench: A Principled Benchmark for Fine-grained Evaluation of Language Models with Language Models

Seungone Kim, Juyoung Suk, ..., **Hanseok Oh**, ... , Sean Wellect, Graham Neubig, Moontae Lee, Kyungjae Lee, and Minjoon Seo

Preprint [[paper](#)]

INSTRUCTIR: A Benchmark for Instruction Following of Information Retrieval Models

**Hanseok Oh**, Hyunji Lee, Seonghyeon Ye, Haebin Shin, Hansol Jang, Changwook Jun, Minjoon Seo

ACL 2024 Workshop on Knowledge-Augmented NLP (KnowledgeNLP) | WIP [[paper](#)]

Ktrl+F: Knowledge-Augmented In-Document Search

**Hanseok Oh**\*, Haebin Shin\*, Miyoung Ko, Hyunji Lee, Minjoon Seo

NAACL 2024 [[paper](#)]

Zero-Shot Dense Video Captioning by Jointly Optimizing Text and Moment

Yongrae Jo, Seongyun Lee, Aiden SJ Lee, Hyunji Lee, **Hanseok Oh**, 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](#)]

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## Experience

### SoftlyAI

*May. 2024-Present*

#### AI research Engineer

Building AI agents that can plan, select proper data sources, and reason.

### LG AI

Research Intern

*Sep.2023 - Feb. 2024*

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 representation method indicating authenticity.

*Jan.2019 - Dec.2019*

### Military Service

Served as a training assistant for the Republic of Korea Air Force Training Wing.

*Sep. 2015 - Sep. 2017*

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## Honors and Awards

- 1st Place, VALUE Challenge Retrieval Track, ICCV 2021
- Korean News Summarization, 3rd prize & Peer evaluation prize, Sungkyunkwan University, Korea (Dec. 2019)
  - 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)