

SOHEE YANG

Ph.D. Student/Research Scientist Intern @ UCL/Google DeepMind

London, England, United Kingdom ◊ Last Update: 19 Jun 2024

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EDUCATION

- Ph.D. in Computer Science** Mar 2023 - Present
@ **UCL NLP**, Department of Computer Science, University College London
& Language Team, **Google DeepMind** (50/50 Time Split)
· Advisors: **Pontus Stenetorp** and **Sebastian Riedel**
- M.S. in Artificial Intelligence** Mar 2021 - Feb 2023
@ **Language & Knowledge Lab**, Kim Jaechul Graduate School of AI, KAIST
· Advisor: **Minjoon Seo**
- B.S. in Computer Science and Engineering (*Summa Cum Laude*)** Mar 2014 - Feb 2018
@ School of CSEE, Handong Global University
· GPA: 4.45 / 4.5 (1st rank in CSEE)

EMPLOYMENT

- Language Team, Google DeepMind** Mar 2023 - Present
Part-Time Research Scientist Intern during Ph.D.
· Interpretability and Controllability of LLMs
- Language & Knowledge Lab, KAIST** Mar 2021 - Feb 2023
Research Assistant (Supervisor: Minjoon Seo)
· Prompt-based Learning of LLMs, Continual Learning of LLMs, Information Retrieval
- Clova AI, NAVER Corp.** Sep 2018 - Feb 2021
Research Engineer
· Text Parser of OCR @ Parsing Team [Demo] Oct 2019 - Feb 2021
· NLU of AiCall (Dialogue System) @ DUET TF [Demo] [JP Video] [KR Video] Sep 2018 - Oct 2019
- AI Team, Kakao Corp.** Jan 2018 - Jun 2018
Research Intern
· NLU and Synthetic Data Generator for Dialogue System @ Context Part
- Deep Learning Lab, Handong Global University** Jun 2016 - Dec 2017
Undergraduate Researcher (Supervisor: In-Jung Kim)
· Deep Learning-based Dialogue State Tracker and Intent Classifier for Dialogue Systems
· Smart T-Commerce Service Using Big Data and Deep Learning [Paper] [Patent]

PUBLICATIONS

* indicates equal contribution.

Preprints

- [1] Eden Biran, Daniela Gottesman, Sohee Yang, Mor Geva, Amir Globerson. **Hopping Too Late: Exploring the Limitations of Large Language Models on Multi-Hop Queries.** *arXiv preprint*, Jun 2024. [Paper]

- [2] Hoyeon Chang, Jinho Park, Seonghyeon Ye, **Sohee Yang**, Youngkyung Seo, Du-Seong Chang, Minjoon Seo. **How Do Large Language Models Acquire Factual Knowledge During Pre-training?**. *arXiv preprint*, Jun 2024. [[Paper](#)] [[Tweet](#)]

Peer-Reviewed Conference/Journal Papers

- [1] Soyoung Yoon, Chaeun Kim, Hyunji Lee, Joel Jang, **Sohee Yang**, Minjoon Seo. **Exploring the Practicality of Generative Retrieval on Dynamic Corpora**. In *Gen-IR Workshop at SIGIR 2024*, 2023. [[Paper](#)] [[Tweet](#)]
- [2] **Sohee Yang**, Elena Gribovskaya, Nora Kassner, Mor Geva*, Sebastian Riedel*. **Do Large Language Models Latently Perform Multi-Hop Reasoning?**. In *ACL*, 2024. [[Paper](#)] [[Tweet](#)]
- [3] **Sohee Yang**, Jonghyeon Kim, Joel Jang, Seonghyeon Ye, Hyunji Lee, Minjoon Seo. **Improving Probability-based Prompt Selection Through Unified Evaluation and Analysis**. *Transactions of the Association for Computational Linguistics (TACL)*, 2024. [[Paper](#)] [[Code](#)] [[Tweet](#)]
- [4] Seonghyeon Ye, Hyeonbin Hwang, **Sohee Yang**, Hyeongu Yun, Yireun Kim, Minjoon Seo. **Investigating the Effectiveness of Task-Agnostic Prefix Prompt for Instruction Following**. In *AAAI*, 2024. [[Paper](#)] [[Code](#)] [[Tweet](#)]
- [5] Joel Jang, Dongkeun Yoon, **Sohee Yang**, Sungmin Cha, Moontae Lee, Lajanugen Logeswaran, Minjoon Seo. **Knowledge Unlearning for Mitigating Privacy Risks in Language Models**. In *ACL*, 2023. [[Paper](#)] [[Code](#)] [[Tweet](#)]
- [6] Hyunji Lee, Jaeyoung Kim, Hoyeon Chang, Hanseok Oh, **Sohee Yang**, Vlad Karpukhin, Yi Lu, Minjoon Seo. **Nonparametric Decoding for Generative Retrieval**. In *Findings of ACL*, 2023. [[Paper](#)] [[Code](#)] [[Tweet](#)]
- [7] Hyunji Lee, **Sohee Yang**, Hanseok Oh, Minjoon Seo. **Generative Multi-hop Retrieval**. In *EMNLP*, 2022. [[Paper](#)] [[Code](#)] [[Tweet](#)]
- [8] Joel Jang*, Seonghyeon Ye*, Changho Lee, **Sohee Yang**, Joongbo Shin, Janghoon Han, Gyeonghun Kim, Minjoon Seo. **TemporalWiki: A Lifelong Benchmark for Training and Evaluating Ever-Evolving Language Models**. In *EMNLP*, 2022. [[Paper](#)] [[Code](#)] [[Tweet](#)]
- [9] Joel Jang, Seonghyeon Ye, **Sohee Yang**, Joongbo Shin, Janghoon Han, Gyeonghun Kim, Stanley Jungkyu Choi, Minjoon Seo. **Towards Continual Knowledge Learning of Language Models**. In *ICLR*, 2022. [[Paper](#)] [[Code](#)] [[Tweet](#)]
- [10] Wonseok Hwang, Jinyeong Yim, Seunghyun Park, **Sohee Yang**, Minjoon Seo. **Spatial Dependency Parsing for Semi-Structured Document Information Extraction**. In *Findings of ACL*, 2021. [[Paper](#)]
- [11] Sewon Min et al. **NeurIPS 2020 EfficientQA Competition: Systems, Analyses and Lessons Learned**. *Proceedings of Machine Learning Research (PMLR)*, 2021. [[Paper](#)] [[Project](#)]
- [12] **Sohee Yang** and Minjoon Seo. **Designing a Minimal Retrieve-and-Read System for Open-Domain Question Answering**. In *NAACL*, 2021. [[Paper](#)] [[Code](#)] [[Poster](#)] [[Slides](#)] [[Video](#)]
- [13] **Sohee Yang** and Minjoon Seo. **Is Retriever Merely an Approximator of Reader?**. In *Spa-NLP Workshop at ACL 2022*, 2020. [[Paper](#)] [[Poster](#)] [[Slides](#)] [[Video](#)] [[Model](#)]
- [14] Jung-Woo Ha*, Kihyun Nam*, Jingu Kang, Sang-Woo Lee, **Sohee Yang**, Hyunhoon Jung, Eunmi Kim, Hyeji Kim, Soojin Kim, Hyun Ah Kim, Kyoungtae Doh, Chan Kyu Lee, Nako Sung, Sunghun Kim. **ClovaCall: Korean Goal-Oriented Dialog Speech Corpus for Automatic Speech Recognition of Contact Centers**. In *INTERSPEECH*, 2020. [[Paper](#)] [[Code](#)]

- [15] Sungdong Kim, **Sohee Yang**, Gyuwan Kim, Sang-Woo Lee. **Efficient Dialogue State Tracking by Selectively Overwriting Memory**. In *ACL*, 2020. [[Paper](#)] [[Code](#)]
- [16] Sang-Woo Lee, Tong Gao, **Sohee Yang**, Jaejun Yoo, Jung-Woo Ha. **Large-Scale Answerer in Questioner’s Mind for Visual Dialog Question Generation**. In *ICLR*, 2019. [[Paper](#)] [[Code](#)] [[Poster](#)] [[Slides](#)]

HONORS, AWARDS & SCHOLARSHIPS

Honors & Awards

- 1st Place, **EfficientQA Competition** 500MB Track Human Eval, NeurIPS 2020 Dec 2020
- Gyeongsangbuk-do Province Governor’s Commendation, HGU Feb 2018
- *Summa Cum Laude*, HGU Feb 2018
- 1st Place (Grand Prize), Senior Capstone Design Competition, HGU Dec 2017

Scholarships

- Full tuition funded by Google DeepMind at UCL Mar 2023 - Present
- 92% of tuition covered by the school at KAIST Mar 2021 - Feb 2023
- Full tuition covered by the school and Korean Government at HGU (merit-based) Mar 2014 - Feb 2018
 - National Science and Engineering Scholarship (Government of South Korea)
 - Merit Scholarship for Academic Excellence (top 1% for 4 times)
 - Entrance Scholarship (top 5%)

TALKS

- **Latent Deductive Reasoning of Large Language Models** Apr 2024
 - The University of Sheffield, Sheffield, United Kingdom
- **EfficientQA & Designing a Minimal Retrieve-and-Read System for ODQA** Dec 2020
 - Tech Talk, Upstage AI, Online
- **DUET (AiCall) and Potential Needs in Dialog** May 2019
 - NAVER LABS Europe × Clova AI Workshop, NAVER LABS Europe, Grenoble, France
- **Large-Scale Answerer in Questioner’s Mind for Visual Dialog Question Generation** May 2019
 - Naver Expo Lunch Talk, ICLR 2019, New Orleans, United States
- **Deep Learning-based Dialogue System** Aug 2018
 - Summer School, Deep Learning Society: Deepest, Seoul, South Korea

SERVICES

Reviewer

- EMNLP 2024 (ARR June), ACL Workshops 2024, ICML Workshop 2024, ACL 2024 (ARR Feb), ICLR 2023, ACL Workshop 2022

Secondary Reviewer

- ICML 2019, ICLR 2019

STUDENT ASSOCIATIONS

- | | |
|--|---------------------|
| Deep Learning Society: Deepest
<i>Seoul National University</i> | Jul 2018 - Feb 2021 |
| · Director | Feb 2019 - Jun 2019 |
| S/W Development Club: Seulgijjagi
<i>Handong Global University</i> | Feb 2014 - Feb 2018 |
| · President | Feb 2016 - Jun 2016 |
| · President | Feb 2015 - Jun 2015 |

TEACHING EXPERIENCE

- | | |
|---|---------------------|
| Teaching Assistant
<i>Handong Global University</i> | |
| · C Programming | Aug 2017 - Dec 2017 |
| · Operating Systems | Feb 2017 - Jun 2017 |
| · Computer Architecture and Organization | Aug 2016 - Dec 2016 |
| · Logic Design | Feb 2016 - Jun 2016 |
| · C Programming | Dec 2015 - Jan 2016 |

LANGUAGE PROFICIENCY

- Korean - Native Level Fluency
- English - High Level Fluency
 - IELTS Academic Overall 8.0 (taken on 31 Dec 2022)
 - TOEFL iBT 109 (taken on 02 Sep 2018)
 - GRE Writing 4.5 (taken on 19 Nov 2017)