





HAEUN YU

PhD student ~ NLP

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ABOUT ME

I am a second year Ph.D. student at NLP Section, Department of Computer Science, University of Copenhagen. I work on explainability focusing on language models' factuality.

RESEARCH INTERESTS

Explainability of Language Models

Mechanistic Interpretability

Factuality

Knowledge Conflict, Parametric Knowledge Elucidation, Knowledge Editing/Unlearning

EDUCATION

- 9/2023 - 8/2026 **Ph.D. in Computer Science** University of Copenhagen, Denmark
Supervised by Prof. Isabelle Augenstein and Prof. Pepa Atanasova
Work on 'Explainable and Robust Automatic Fact Checking (ExplainYourself)' project
- 3/2021 - 2/2023 **M.Sc. in Computer Science and Engineering** Sungkyunkwan University, South Korea
Supervised by Prof. Youngjoong Ko
Thesis: Dialogue State Tracking System with Graph-structured Discourse Information
Honors: Korea Telecom (KT) AI Scholarship
GPA: 4.39/4.5
- 3/2017 - 2/2021 **B.A. in Global Korean Studies & B.Sc. Bigdata Science** Sogang University, South Korea
Honors: Cum Laude
GPA: 3.6/4.3

EXPERIENCE

- 2/2023 - 8/2023 **Assistant Research Engineer** Korea Telecom (KT) AI2XL Lab.
Developed Question Answering System with passage retriever.
Developed a Korean knowledge grounded conversation dataset in financial domain.
LLMs / Retrieval-Augmented Generation / Information Retrieval

PUBLICATIONS

Conferences

- [1] S. V. Marjanović*, **Haeun Yu***, P. Atanasova, M. Maistro, C. Lioma, and I. Augenstein. "DYNAMICQA: Tracing Internal Knowledge Conflicts in Language Models". In: *Findings of the Association for Computational Linguistics: EMNLP 2024*. 2024, to appear. URL: <https://arxiv.org/abs/2407.17023>.
- [2] **Haeun Yu**, P. Atanasova, and I. Augenstein. "Revealing the Parametric Knowledge of Language Models: A Unified Framework for Attribution Methods". In: *Proceedings of the 62nd Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*. Ed. by L.-W. Ku, A. Martins, and V. Srikumar. Bangkok, Thailand: Association for Computational Linguistics, Aug. 2024, pp. 8173–8186. URL: <https://aclanthology.org/2024.acl-long.444>.
- [3] C. Park, E. Ha, Y. Jeong, C. Kim, **Haeun Yu**, and J. Sung. "CopyT5: Copy Mechanism and Post-Trained T5 for Speech-Aware Dialogue State Tracking System". In: *Proceedings of The Eleventh Dialog System Technology Challenge*. Ed. by Y.-N. Chen, P. Crook, M. Galley, S. Ghazarian, C. Gunasekara, R. Gupta, B. Hedayatnia, S. Kottur, S. Moon, and C. Zhang. Prague, Czech Republic: Association for Computational Linguistics, Sept. 2023, pp. 89–94. URL: <https://aclanthology.org/2023.dstc-1.11>.
- [4] S. Park, K. Choi, **Haeun Yu**, and Y. Ko. "Never Too Late to Learn: Regularizing Gender Bias in Coreference Resolution". In: *Proceedings of the Sixteenth ACM International Conference on Web Search and Data Mining, WSDM 2023, Singapore, 27 February 2023 - 3 March 2023*. Ed. by T. Chua, H. W. Lauw, L. Si, E. Terzi, and P. Tsaparas. ACM, 2023, pp. 15–23. URL: <https://doi.org/10.1145/3539597.3570473>.
- [5] **Haeun Yu**, T. Hong, and Y. Ko. "Adapting Pre-trained Language Model for Dialogue State Tracking on Spoken Conversations". In: *Proceedings of the 30th ACM International Conference on Information & Knowledge Management*. 2022. URL: https://github.com/shanemoon/dstc10/raw/main/papers/dstc10_aaai22_track2_25.pdf.
- [6] B. Kim, H. Choi, **Haeun Yu**, and Y. Ko. "Query Reformulation for Descriptive Queries of Jargon Words Using a Knowledge Graph based on a Dictionary". In: *Proceedings of the 30th ACM International Conference on Information & Knowledge Management*. 2021. URL: <https://doi.org/10.1145/3459637.3482382>.

Journals

- [7] **Haeun Yu** and Y. Ko. "Enriching the dialogue state tracking model with a asyntactic discourse graph". In: *Pattern Recognition Letters* 169 (2023), pp. 81–86. ISSN: 0167-8655. URL: <https://www.sciencedirect.com/science/article/pii/S0167865523000958>.
- [8] B. Kim, H. Choi, **Haeun Yu**, and Y. Ko. "Graph-based query reformulation system for descriptive queries of jargon words using definitions". In: *Expert Systems with Applications* 214 (2023), p. 119149. ISSN: 0957-4174. URL: <https://www.sciencedirect.com/science/article/pii/S0957417422021674>.
- [9] T. Hong, J. Cho, **Haeun Yu**, Y. Ko, and J. Seo. "Knowledge-grounded dialogue modelling with dialogue-state tracking, domain tracking, and entity extraction". In: *Comput. Speech Lang.* 78 (2023), p. 101460. URL: <https://www.sciencedirect.com/science/article/pii/S0885230822000833>.
- [10] **Haeun Yu** and Y. Ko. "Entity Graph Based Dialogue State Tracking Model with Data Collection and Augmentation for Spoken Conversation". In: *Journal of KIISE* 49.10 (Oct. 2022), pp. 891–897. ISSN: 2383-6296. URL: <http://dx.doi.org/10.5626/J0K.2022.49.10.891>.

ADDITIONAL ACADEMIC ACTIVITIES

- 2022 Participation in Dialogue System Track Challenge 11 (DSTC11) Track 3.
Augmented the dialogue using new ontology crawled from wikipedia to train the model with various named entities.

Teaching Assistant of Data Structure & Algorithms at Sungkyunkwan University
- 2021 Participation in Dialogue System Track Challenge 10 (DSTC10) Track 2 Task 1.
Achieved rank 5th out of 11 entries in Track 2 Task 1 Dialogue State Tracking (Team A09)

Teaching Assistant of Natural Language Processing at Sungkyunkwan University
- 2019 Exchange student at Umeå University, Umeå, Sweden

SKILLS

- Extensive programming experience with Python
- Experience working with NLP, machine learning algorithms and tools, including HuggingFace, PyTorch, scikit-learn, NLTK, deep graph library and spaCy
- Goal-oriented, organized, excellent at prioritization