DO, Van Quyet

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Research Interests

The two main problems with current LLMs that I am concerned are efficient learning ability and generalized reasoning ability. Therefore, for future research, I will focus on the following areas:

- **Neuro-symbolic reasoning methods:** I intend to investigate the utilization of external resources, specifically existing knowledge graphs, in order to facilitate the identification and rectification of erroneous beliefs within language models.
- Efficient (transfer) learning: I aspire to enable LMs to learn from very little supervision, which is a hallmark of human intelligence. I am particularly interested in how to discover and effectively finetune the most critical subnetworks of LMs w.r.t to each task.

Education

08/2022 - Present	M.Phil. Computer Science and Engineering Hong Kong University of Science and Technology (HKUST) Supervisor: Prof. Yangqiu Song Specialization: <i>Natural Language Processing, Commonsense Reasoning</i>
08/2018 - 06/2022	B.Sc. Data Science and Pure Math (Advanced Track) Hong Kong University of Science and Technology (HKUST) CGA: 4.0/4.3 as of Graduation (Top 2/39) First Class Honors with Academic Achievement Medal

Research Publications

Articles

- **Q. V. Do**, J. Li, T.-D. Vuong, Z. Wang, Y. Song, and X. Ma, "What really is commonsense knowledge," *Under Review*, 2024.
- T. Fang, Q. V. Do, S. Choi, W. Wang, and Y. Song, "CKBP v2: An expert-annotated evaluation set for commonsense knowledge base population," *ArXiv*, vol. abs/2304.10392, 2023. *O* URL: https://api.semanticscholar.org/CorpusID:258236552.

Conference Proceedings

- **Q. V. Do**, T. Fang, S. Diao, Z. Wang, and Y. Song, "ConstraintChecker: A plugin for large language models to reason on commonsense knowledge bases," in *Proceedings of EACL*, St. Julians, Malta: Association for Computational Linguistics, Mar. 2024.
- Y. Bang, S. Cahyawijaya, N. Lee, *et al.*, "A multitask, multilingual, multimodal evaluation of chatgpt on reasoning, hallucination, and interactivity," in *Proceedings of IJCNLP-AACL*, Nusa Dua, Bali: Association for Computational Linguistics, Nov. 2023, pp. 675–718. *O* URL: https://aclanthology.org/2023.ijcnlp-long.45.
- Z. Wang, Q. V. Do, H. Zhang, *et al.*, "COLA: Contextualized commonsense causal reasoning from the causal inference perspective," in *Proceedings of ACL*, Toronto, Canada: Association for Computational Linguistics, Jul. 2023, pp. 5253–5271. *O* DOI: 10.18653/v1/2023.acl-long.288.
- T. Fang, Q. V. Do, H. Zhang, Y. Song, G. Y. Wong, and S. See, "PseudoReasoner: Leveraging pseudo labels for commonsense knowledge base population," in *Findings of the EMNLP*, Abu Dhabi, United Arab Emirates: Association for Computational Linguistics, Dec. 2022, pp. 3379–3394. O DOI: 10.18653/v1/2022.findings-emnlp.246.

Teaching Experience

09/2023 - 12/2023	Teaching Assistant , COMP2211: Exploring Artificial Intelligence, HKUST
02/2023 - 05/2023	Teaching Assistant , COMP4332: Big Data Mining and Management, HKUST
08/2017 - 07/2018	Teaching Assistant , CMATH Mathematics Center, Hanoi

Working Experience

03/2021 - 09/2021

09/2019 - 09/2021

06/2022 - 08/2022	Software Engineer Intern, Eureka FinTech Limited, Hong Kong
09/2021 - 06/2022	Research Assistant, Knowledge Computation Group, HKUST

- Research Assistant, Knowledge Computation Group, HKUST
- AI Engineer Intern, R&D group, Vietnam Technology International, Hanoi
- Research Assistant, HKUST Cheminformatics Lab (led by Prof. Haibin SU), HKUST

Awards and Achievements

2023	Area Chair Award, Language Modeling and Analysis Track, IJCNLP-AACL 2023
2022-2024	Postgraduate Studentship , HKUST
2022	Academic Achievement Medalist of UG Class of 2022, HKUST
2019-2022	Chern Class Achievement Scholarship with outstanding performance , HKUST
2021, 2022	Epsilon Fund Award , HKUST
2018-2022	Dean's List Student (All semesters except Spring 2021), HKUST
	University Scholarship , HKUST
2017	Bronze Medalist , 58th International Mathematical Olympiad

Miscellaneous Experience

Skills

Languages	Vietnamese (Native), English (Full Proficiency), Chinese (Elementary Proficiency)
Coding	Python, PyTorch, familiar to TPU-training and Cloud Computing
Misc.	Seminar/event organization, Mental health First aid, Presentation (sample)
Services	
Reviewer	EMNLP'22,23, ACL'23, AACL'23, EACL'24
Volunteer	IJCAI'23
Others	Guest speaker @ HKUST DSCT Alumni Sharing 2022
	Representative @ HKUST RGC Visit 2023
	Head of Event Organization @ VSAHK 2023
	• Speaker @ MathTally age (Vietnam)

• Speaker @ MathTalk 2024 (Vietnam)

References

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Dr. Raymond Wong Professor HKUST Clear Water Bay, Hong Kong. raywong@cse.ust.hk

Dr. Desmond Tsoi Assistant Professor of Engineering Education HKUST Clear Water Bay, Hong Kong. desmond@ust.hk