DO, Van Quyet

✉ Email: vqdo@connect.ust.hk   🎓 Semantic Scholar
🌐 Homepage: http://dovanquyet.github.io/

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: *Natural Language Processing, Commonsense Reasoning*
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

1. **Q. V. Do**, J. Li, T.-D. Vuong, Z. Wang, Y. Song, and X. Ma, "What really is commonsense knowledge," *Under Review*, 2024.

2. 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. 🔗 URL: https://api.semanticscholar.org/CorpusID:258236552.

Conference Proceedings

1. **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.

2. 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. 🔗 URL: https://aclanthology.org/2023.ijcnlp-long.45.

3. 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. 🔗 DOI: 10.18653/v1/2023.acl-long.288.

4. 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. 🔗 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

06/2022 - 08/2022		**Software Engineer Intern**, Eureka FinTech Limited, Hong Kong
09/2021 - 06/2022		**Research Assistant**, Knowledge Computation Group, HKUST
03/2021 - 09/2021		**AI Engineer Intern**, R&D group, Vietnam Technology International, Hanoi
09/2019 - 09/2021		**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

Talks

04/2024		ConstraintChecker: A Plugin for Large Language Models to Reason on Commonsense Knowledge Bases (HKUST CSE RTF 2024)

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 @ MathTalk 2024 (Vietnam)

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)

References

Dr. Yangqiu Song
Associate Professor
HKUST
Clear Water Bay, Hong Kong.
✉ yqsong@cse.ust.hk

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