JIE HE

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EDUCATION

University of Edinburgh, UK   Sept. 2022 - Expected 2025
PhD., ILCC, School of Informatics.

- Advisor: Prof Jeff Pan and Prof Edoardo M. Ponti .
- Research interests: Natural Language Processing, Knolwedge Distillation, Commonsense Reasoning.
- Fully-funded by Informatics Global PhD Scholarship

Tianjin University, China   Sept. 2019 - Jan. 2022
M.S., Dept. of Computer Science. , Advisor: Prof. Deyi Xiong.

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- Research interests: Commonsense Reasoning.

Shandong University, China   Sept. 2015 - July. 2019
B.S., Dept. of Software Engineering.

RESEARCH INTERESTS

My primary research interests are in building Language Technology for All, through natural language understanding and generation. Towards this goal, I have an interest in commonsense knowledge and interpretability. Besides, recently, I am interested in the application of large language models (LLM), and I am currently doing research about Chain of Thought (COT). Commonsense involves both the usage of commonsense datasets [1] and method incorporating knowledge to NLP models [4, 5, 7]. Interpretability involves the diagnose and analyze the errors of existing models [2] and give the model the ability to explain its prediction. I am also interested in discourse phenomena [3].

PUBLICATION

[1] The Box is in the Pen: Evaluating Commonsense Reasoning in Neural Machine Translation
Jie He*, Tao Wang*, Deyi Xiong, Qun Liu
Findings of the Association for Computational Linguistics: EMNLP 2020.

[2] TGError: An Error-Annotated Dataset and Benchmark Tasks for Text Generation from Pretrained Language Models
Jie He*, Bo Peng*, Yi Liao, Qun Liu, Deyi Xiong
The 59th Annual Meeting of the Association for Computational Linguistics (ACL2021)

[3] Evaluate Discourse Cohesion in Pre-trained Language Models
Jie He, Wanqiu Long, Deyi Xiong
Proceedings of the 3rd Workshop on Computational Approaches to Discourse in COLING 2022

[4] MetaXCR: Reinforcement-Based Meta-Transfer Learning for Cross-Lingual Commonsense Reasoning
Jie He, Yu Fu
Proceedings of The 1st Transfer Learning for Natural Language Processing Workshop in Neurips 2022.

[5] BUCA: A Binary Classification Approach to Unsupervised Commonsense Question Answering
Jie He, Simon Yu, Victor Gutierrez Basulto , Jeff Pan
The 61th Annual Meeting of the Association for Computational Linguistics (ACL 2023).

[6] Instances and Labels: Hierarchy-aware Joint Supervised Contrastive Learning for Hierarchical Multi-Label Text Classification
Simon Yu*, **Jie He***, Victor Gutierrez Basulto , Jeff Pan
Findings of the Association for Computational Linguistics: EMNLP 2023.

[7] Meta-RTL: Reinforcement-Based Meta-Transfer Learning for Low-Resource Commonsense Reasoning
Jie He, Yu Fu, Yifang Yang, Qun Liu, Deyi Xiong
In submission.

[8] *k*NN-XICL: Cross-lingual In-Context Learning with Nearest Neighbor Inference
Jie He, Simon Yu, Victor Gutierrez Basulto , Jeff Pan
In submission.

INTERNSHIP/TRAININGS

1. Research intern in SDU IR LAB   2018.1-2018.6
   Advisor: Zhumin Chen
   Constructing Sports News from live text commentary. We designed a deep learning model to fully automatically construct sports news from Live Text.

2. Collaboration with Huawei Noah's Ark Lab.   2020.9-2021.7
   Advisor: Qun Liu.
   Chinese text error correction. We investigated the error produced by GPT2's text generation and developed a set of annotation tools for annotation. Finally, we published a paper in ACL2021.

3. Reseach intern in Copenhagen NLP   2021.8-2022.8
   Advisor: Daniel Hershcovich
   Systematic analysis of the application of graph neural networks in neural machine translation systems. We use GCN to encode UD, AMR and other semantic/syntax information, and observe whether the introduction of this information will bring performance improvements in some challenging machine translation test sets.

4. Reseach intern in UCL   2021.9-2022.1
   Advisor: Pasquale Minervini
   Systematic research on the application of prompt learning in natural language explanation tasks.

5. Collaboration with Cardiff NLP   2022.10-now
   Advisor: Victor Gutierrez Basulto.

TEACHING

University of Edinburgh

- Tutor - Knowledge Graph (Fall 2023)

SERVICES

Reviewer: AACL (2022, 2023), SIGDIAL (2023), EMNLP (2023)

SKILLS

Programming	Python, C/C++, Java, Matlab, Latex
Languages	Chinese (native), English (fluent)
Toolkits and Frameworks	PyTorch, Transformers, Numpy, Pandas, Huggingface, AllenNLP

SCHOLARSHIP&AWARDS

- Nominated by the University of Edinburgh (one of three) for AIML Apple Scholars 2024

- PhD Scholarship, School of Informatics, University of Edinburgh
  £16,062 per year & the international student tuition fees   10/2022 - 09/2025

- The first prize scholarship in Tianjin University   2020
- The first prize scholarship in Tianjin University   2021