
EDUCATION	School of Informatics, University of Edinburgh <i>Ph.D. in ILCC</i>	Edinburgh, UK 2022 - 2026 (<i>expected</i>)
	<ul style="list-style-type: none">• Advisor: Prof. Jeff Pan• Research area: RAG-based Large Language Model, Knowledge Distillation, Commonsense Reasoning, Robustness.	
	Department of Computer Science, Tianjin University <i>M.S. in Computer Science</i>	Tianjin, China 2019 - 2022
	<ul style="list-style-type: none">• Advisor: Prof. Deyi Xiong• Research area: Commonsense Reasoning.	
	Department of Software Engineering, Shandong University <i>B.E. of Engineering, Software Engineering</i>	Shandong, China 2015 - 2019
RESEARCH INTERESTS	<p>My primary research interests lie in developing Language Technology for All, focusing on natural language understanding and generation. I am particularly interested in knowledge retrieval-based NLP systems. Recently, I have expanded my focus to include the analysis and application of large language models (LLMs) [7, 8, 11, 12], with a specific emphasis on robustness and multi-modal capabilities. Commonsense involves both the construction of commonsense datasets [1, 13] and methods incorporating knowledge into NLP models [4, 5, 9]. Interpretability involves diagnosing and analyzing the errors of existing models [2] and giving the model the ability to explain its predictions. I am also interested in discourse phenomena [3].</p>	
EMPLOYMENTS	Nvidia Retriever Team, Remotely Research intern	2025.10 - 2026.02
	<ul style="list-style-type: none">• Advisor: Yauhen Babakhin, Ronay Ak, Bo Liu	
	Apple MLR, Seattle, US Research intern	2025.06 - 2025.09
	<ul style="list-style-type: none">• Advisor: Yizhe Zhang• Investigating to compress documents for retrieval augmented generation.	
	MSR, Redmond, US Research intern	2024.07 - 2024.10
	<ul style="list-style-type: none">• Advisor: Pei Zhou, Longqi Yang, Jennifer Neville• Tool learning.	
	Apple AI/ML, Seattle, US Research intern	2024.02 - 2024.05
	<ul style="list-style-type: none">• Advisor: Yiwen Sun, Benjamin Han• Investigating to generate rationales for knowledge-based question answering without training.	
Cardiff NLP, UK Collaboration	2022.10 - Present	
<ul style="list-style-type: none">• Advisor: Victor Gutierrez Basulto		
UCL, Remote Research intern	2021.09 - 2022.01	
<ul style="list-style-type: none">• Advisor: Pasquale Minervini• Systematic research on the application of prompt learning in natural language explanation tasks.		
Huawei Noah's Ark Lab, China Collaboration	2020.09 - 2021.07	
<ul style="list-style-type: none">• Advisor: Qun Liu• Chinese text error correction. Investigated the error produced by GPT2's text generation and developed a set of annotation tools for annotation. Published a paper in ACL2021.		

PUBLICATIONS

1. **Jie He***, Tao Wang*, Deyi Xiong, Qun Liu. The Box is in the Pen: Evaluating Commonsense Reasoning in Neural Machine Translation. *Findings of the Association for Computational Linguistics: EMNLP 2020*.
2. **Jie He***, Bo Peng*, Yi Liao, Qun Liu, Deyi Xiong. TGEError: An Error-Annotated Dataset and Benchmark Tasks for Text Generation from Pretrained Language Models. *The 59th Annual Meeting of the Association for Computational Linguistics (ACL2021)*.
3. **Jie He**, Wanqiu Long, Deyi Xiong. Evaluate Discourse Cohesion in Pre-trained Language Models. *Proceedings of the 3rd Workshop on Computational Approaches to Discourse in COLING 2022*.
4. **Jie He**, Yu Fu. MetaXCR: Reinforcement-Based Meta-Transfer Learning for Cross-Lingual Commonsense Reasoning. *Proceedings of The 1st Transfer Learning for Natural Language Processing Workshop in Neurips 2022*.
5. **Jie He**, Simon Yu, Victor Gutierrez Basulto, Jeff Pan. BUCA: A Binary Classification Approach to Unsupervised Commonsense Question Answering. *The 61th Annual Meeting of the Association for Computational Linguistics (ACL 2023)*.
6. Simon Yu*, **Jie He***, Victor Gutierrez Basulto, Jeff Pan. Instances and Labels: Hierarchy-aware Joint Supervised Contrastive Learning for Hierarchical Multi-Label Text Classification. *Findings of the Association for Computational Linguistics: EMNLP 2023*.
7. Xiongtao Zhou*, **Jie He***, Yuhua Ke, Guangyao Zhu, Victor Gutierrez Basulto, Jeff Z. Pan. An Empirical Study on Parameter-Efficient Fine-Tuning for MultiModal Large Language Models. *Findings of the Association for Computational Linguistics: ACL 2024*.
8. Simon Yu*, **Jie He***, Pasquale Minervini, Jeff Pan. Evaluating the Adversarial Robustness of Retrieval-Based In-Context Learning for Large Language Models. *Conference On Language Modeling 2024 (COLM 2024)*.
9. **Jie He***, Yijun Yang*, Wanqiu Long, Victor Gutierrez Basulto, Jeff Z. Pan. Exploring Knowledge Graph to Text Generation with Large Language Models: Techniques, Challenges, and Innovations. NAACL 2025.
10. Xiongtao Zhou*, **Jie He***, Lanyu Chen, jingyu li, Haojing Chen, Victor Gutierrez Basulto, Jeff Z. Pan, Hanjie Chen MiCEval: Unveiling Multimodal Chain of Thought's Quality via Image Description and Reasoning Steps. NAACL 2025.
11. **Jie He**, Jennifer Neville, Mengting Wan, Longqi Yang, Hui Liu, Xiaofeng Xu, Xia Song, Jeff Z. Pan, Pei Zhou. GenTool: Enhancing Tool Generalization in Language Models through Zero-to-One and Weak-to-Strong Simulation. *Findings of the Association for Computational Linguistics: ACL 2025*.
12. **Jie He**, Simon Yu, Victor Gutierrez Basulto, Jeff Pan. k NN-XICL: Cross-lingual In-Context Learning with Nearest Neighbor Inference. *International Neural Network Society Workshop on Deep Learning Innovations and Applications in IJCNN 2025*.
13. **Jie He***, Nan Hu*, Wanqiu Long, Jiaoyan Chen, Jeff Z. Pan. MINTQA: A Multi-Hop Question Answering Benchmark for Evaluating LLMs on New and Tail Knowledge. *In submission*.
14. **Jie He**, Victor Gutierrez Basulto, Jeff Pan. From Reflection to Sufficiency: Reinforcement-Guided Thinking Quality in Retrieval-Augmented Reasoning for LLMs. *In submission*.
15. **Jie He**, Richard He Bai, Sinead Williamson, Jeff Z. Pan, Navdeep Jaitly, Yizhe Zhang. Clara: Bridging Retrieval and Generation with Continuous Latent Reasoning. *In submission*.
16. Yijun YANG, **Jie He**, Pinzhen Chen, Victor Gutierrez Basulto, Jeff Z. Pan. UniArk: A Holistic Approach to Unbiased and Consistent Factual Knowledge Extraction. *The North American Chapter of the Association for Computational Linguistics (NAACL 2024)*.
17. Yu Fu*, **Jie He***, Yifang Yang, Qun Liu, Deyi Xiong. Meta-RTL: Reinforcement-Based Meta-Transfer Learning for Low-Resource Commonsense Reasoning. Preprint.
18. **Jie He**, Wendi Zhou, Xiang Lorraine Li, Jeff Z. Pan. Similarity-Based Domain Adaptation with LLMs for Cross-Domain Sentiment Classification. Preprint.

SCHOLARSHIP & AWARDS • **Apple Scholars** in AI/ML PhD fellowship 2024 - 2026
• **PhD Scholarship**, School of Informatics, University of Edinburgh 10/2022 - 09/2025

TEACHING **Tutor:** Knowledge Graph, University of Edinburgh (Fall 2023)

ACADEMIC SERVICES **Reviewers:** *AAACL (2022, 2023), SIGDIAL (2023), EMNLP (2023), EAACL (2024), NAACL (2024), ACL (2024), ARR (2023.10 - now), COLM (2024), ICLR (2025), Coling (2025)*
Area Chair: *EMNLP (2024), ARR (2024.06 - now)*

CODING SKILLS **Programming:** Python, C/C++, Java, MATLAB, LaTeX.
Languages: Chinese (native), English (fluent).
Toolkits and Frameworks: PyTorch, Transformers, Numpy, Pandas, Huggingface, AllenNLP.