JIE HE

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EDUCATION

PhD., ILCC, School of Informatics.   Sept. 2022 - Expected 2025
University of Edinburgh, Advisor: Prof. Jeff Pan.

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

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

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 scale pre-trained language models, 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]. 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
Accepted by Proc. of **EMNLP 2020 Findings (long)**.
The public test suite can be found at: [Github]

[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
Accepted by **ACL 2021 (long)**.

[3] Evaluate Discourse Cohesion in Pre-trained Language Models
Jie He, Wanqiu Long, Deyi Xiong
Accepted by **CODI@Coling 2022 (short)**.

[4] MetaXCR: Reinforcement-Based Meta-Transfer Learning for Cross-Lingual Commonsense Reasoning
Jie He, Yu Fu
Accepted by **TL4NLP@Neurips 2022 (long)**.

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

[6] BUCA: A Binary Classification Approach to Unsupervised Commonsense Question Answering
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-now
   Advisor: Qun Liu.
   Chinese text error correction. We investigated the error produced by GPT2's text generation.

   - Developed a set of annotation tools for annotation.

   - Built a comprehensive error classification system for the error analysis.

   - Submitted a paper to ACL2021.

3. Reseach intern in Copenhagen nlp   2021.6-2022.8
   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.

SERVICES

Reviewer: AACL (2022)

SKILLS

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

SCHOLARSHIP&AWARDS

- 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 (10%)   2020

- The first prize scholarship in Tianjin University (10%)   2021