

Jiangjie Chen

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Biography

Jiangjie Chen (陈江捷) is a fourth-year Ph.D. candidate at Fudan University in School of Computer Science, Shanghai, China, major in Software Engineering. His mainly interested research topics include (but are not limited to):

- **Machine reasoning**, especially on endowing various kinds of human-like reasoning abilities to large language models, including analogical reasoning, counterfactual reasoning, decision-making, language planning, etc.;
- **Text generation**, especially on the building of factual, faithful, controllable, and knowledge-guided text generation techniques upon large language models;
- **The intersect** of text reasoning and text generation, i.e., understanding and utilizing the vehicle of natural language for human-level reasoning.

Education

Fudan University (Shanghai). Ph.D. in Software Engineering 2019 - 2024 (estimated)

Fudan University (Shanghai). B.S. in Computer Science (*honors student*) 2014 - 2019

Research Publications

[*: Equal Contribution]

1. **Adaptive Chameleon or Stubborn Sloth: Unraveling the Behavior of Large Language Models in Knowledge Clashes**
Jian Xie*, Kai Zhang*, **Jiangjie Chen**, Renze Lou, Yu Su.
Preprint, 2023.
2. **Beneath Surface Similarity: Large Language Models Make Reasonable Scientific Analogies after Structure Abduction**
Siyu Yuan, **Jiangjie Chen**, Xuyang Ge, Yanghua Xiao, Deqing Yang.
Preprint, 2023.
3. **AnalogyKB: Unlocking Analogical Reasoning of Language Models with A Million-scale Knowledge Base**
Siyu Yuan*, **Jiangjie Chen***, Changzhi Sun, Jiaqing Liang, Yanghua Xiao, Deqing Yang.
Preprint, 2023
4. **Say What You Mean! Large Language Models Speak Too Positively about Negative Commonsense Knowledge**
Jiangjie Chen, Wei Shi, Ziquan Fu, Sijie Cheng, Lei Li, Yanghua Xiao.
Long paper, in: *ACL 2023*.
5. **Distilling Script Knowledge from Large Language Models for Constrained Language Planning**
Siyu Yuan, **Jiangjie Chen**, Ziquan Fu, Xuyang Ge, Soham Shah, Charles Robert Jankowski, Yanghua Xiao, Deqing Yang.
Long paper, in: *ACL 2023*, *Outstanding Paper Award*.
6. **Converge to the Truth: Factual Error Correction via Iterative Constrained Editing**
Jiangjie Chen*, Rui Xu*, Wenxuan Zeng, Changzhi Sun, Lei Li, Yanghua Xiao.
Regular paper, in: *AAAI 2023*.
7. **Unsupervised Explanation Generation via Correct Instantiations**
Sijie Cheng, Zhiyong Wu, **Jiangjie Chen**, Zhixing Li, Yang Liu, Lingpeng Kong.
Regular paper, in: *AAAI 2023*.
8. **Harnessing Knowledge and Reasoning for Human-Like Natural Language Generation: A Brief Review**
Jiangjie Chen, Yanghua Xiao.
Invited paper, in: *Bulletin of the IEEE Technical Committee on Data Engineering (2022)*
9. **Neighbors Are Not Strangers: Improving Non-Autoregressive Translation under Low-Frequency Lexical Constraints**
Chun Zeng*, **Jiangjie Chen***, Tianyi Zhuang, Rui Xu, Hao Yang, Ying Qin, Shimin Tao, Yanghua Xiao.
Long paper, in: *NAACL 2022*.
10. **E-KAR: A Benchmark for Rationalizing Natural Language Analogical Reasoning**
Jiangjie Chen, Rui Xu, Ziquan Fu, Wei Shi, Zhongqiao Li, Xinbo Zhang, Changzhi Sun, Lei Li, Yanghua Xiao and Hao Zhou.
Long paper, in: *Findings of ACL 2022*.
11. **FalCon: A Faithful Contrastive Framework for Response Generation in TableQA Systems**
Shineng Fang, **Jiangjie Chen**, Xinyao Shen, Yunwen Chen, Yanghua Xiao.
Long paper, in: *DASFAA 2022*.

12. **LoReN: Logic-Regularized Reasoning for Interpretable Fact Verification**
Jiangjie Chen, Qiaoben Bao, Changzhi Sun, Xinbo Zhang, Jiaze Chen, Hao Zhou, Yanghua Xiao, Lei Li.
 Regular paper, in: *AAAI 2022*.
13. **Unsupervised Editing for Counterfactual Stories**
Jiangjie Chen, Chun Gan, Sijie Cheng, Hao Zhou, Yanghua Xiao, Lei Li.
 Regular paper, in: *AAAI 2022*.
14. **Diversified Query Generation Guided with Knowledge Graph**
 Xinyao Shen, **Jiangjie Chen**, Jiaze Chen, Chun Zeng, Yanghua Xiao.
 Long paper, in: *WSDM 2022*.
15. **Harvesting More Answer Spans from Paragraphs beyond Annotation**
 Qiaoben Bao, **Jiangjie Chen**, Linfang Liu, Jiaqing Liang, Jingping Liu, Yanghua Xiao.
 Long paper, in: *WSDM 2022*.
16. **Diversified Paraphrase Generation with Commonsense Knowledge Graph**
 Xinyao Shen, **Jiangjie Chen**, Yanghua Xiao.
 Long paper, in: *NLPCC 2021*.
17. **Probabilistic Graph Reasoning for Natural Proof Generation**
 Changzhi Sun*, Xinbo Zhang*, **Jiangjie Chen**, Chun Gan, Yuanbin Wu, Jiaze Chen, Hao Zhou, Lei Li.
 Long paper, in: *Findings of ACL 2021*.
18. **Ensuring Readability and Data-fidelity using Head-modifier Templates in Deep Type Description Generation**
Jiangjie Chen, Ao Wang, Haiyun Jiang, Suo Feng, Chenguang Li, Yanghua Xiao.
 Long paper, in: *ACL 2019*.
19. **CN-Probase: A Data-driven Approach for Large-scale Chinese Taxonomy Construction**
 Jindong Chen, Ao Wang, **Jiangjie Chen**, Yanghua Xiao, Zhendong Chu, Jingping Liu, Jiaqing Liang, Wei Wang.
 Short paper, in: *ICDE 2019*.

Experience

Allen Institute for AI (Seattle, WA, USA)	June 2023 - Present
<ul style="list-style-type: none"> • Role: Research Intern, Aristo Team • Mentor(s): Kyle Richardson • Topics: Multi-agent Reasoning and Planning, Large Language Models 	
University of California, Santa Barbara (Remote)	Sept. 2021 - May 2023
<ul style="list-style-type: none"> • Role: Research Intern • Host: Lei Li • Topics: Machine Reasoning 	
ByteDance AI Lab (Shanghai, China)	Nov. 2019 - May 2023
<ul style="list-style-type: none"> • Role: Research Intern • Mentor(s): Lei Li, Hao Zhou, Changzhi Sun, Jiaze Chen • Topics: Knowledge-guided Generation, Machine Reasoning 	
Knowledge Works Lab, Fudan University (Shanghai, China)	Apr. 2017 - Present
<ul style="list-style-type: none"> • Role: Student Researcher • Advisor(s): Yanghua Xiao • Topics: Text Generation, Machine Reasoning, Knowledge Graph 	

Awards

ACL 2023 Outstanding Paper Award	2023
China National Scholarship for Doctoral Students	2022
Honors Student Award in Computer Science of Top Talent Undergraduate Training Program	2019

Academic Service

- Serving as a Program Committee of ACL (2023), EMNLP (2021-), AAAI (2021-), WSDM (2023), NLPCC (2021-).
- Serving as a Reviewer of TPAMI (2022-), APIN (2022-).