Jiangjie Chen

✉ jjchen19@fudan.edu.cn · % https://jiangjiechen.github.io

Research Interests

Devoted to reasoning over natural language and making machines right for the right reasons. Mainly interested research topics include (but are not limited to):

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

Education

Fudan University (Shanghai). Ph.D. in Computer Science ⸺ 2019 - 2024 (estimated)
Ph.D. Advisor: Yanghua Xiao.

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

Research Papers

[*: Equal Contribution]

Publications

1. **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.*

2. **Unsupervised Explanation Generation via Correct Instantiations**
   Sijie Cheng, Zhiyong Wu, **Jiangjie Chen**, Zhixing Li, Yang Liu, Lingpeng Kong.
   Regular paper, in: *AAAI 2023.*

3. **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* (oral).

4. **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.*

5. **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.*

6. **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* (oral).

7. **Unsupervised Editing for Counterfactual Stories**
   Jiangjie Chen, Chun Gan, Sijie Cheng, Hao Zhou, Yanghua Xiao, Lei Li.
   Regular paper, in: *AAAI 2022* (oral).

8. **Diversified Query Generation Guided with Knowledge Graph**
   Xinyao Shen, **Jiangjie Chen**, Jiaze Chen, Chun Zeng, Yanghua Xiao.
   Long paper, in: *WSDM 2022.*

9. **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.*

10. **Diversified Paraphrase Generation with Commonsense Knowledge Graph**
    Xinyao Shen, **Jiangjie Chen**, Yanghua Xiao.
    Long paper, in: *NLPCC 2021* (oral).

11. **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.*

12. **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*.

13. **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*. (CN-Probase has achieved near 100 million API calls at http://kw.fudan.edu.cn/cnprobase.)

Experience

University of California, Santa Barbara (Remote)   Sept. 2021 - Present
- Role: Research Intern
- Host: Lei Li
- Topics: Machine Reasoning

ByteDance AI-Lab (Shanghai)   Nov. 2019 - Present
- Role: Research Intern
- Advisors: Lei Li (now at UCSB), Hao Zhou (now at Tsinghua University), Changzhi Sun
- Topics: Knowledge-guided Generation, Machine Reasoning

Knowledge Works Lab at Fudan University (Shanghai)   Apr. 2017 - Present
- Role: Student Researcher
- Advisor: Yanghua Xiao
- Topics: Text Generation, Machine Reasoning, Knowledge Graph

Awards

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

Academic Service

- Program Committee/Reviewer of EMNLP (2021, 2022), AAAI (2021-2023), TPAMI (2022), APIN (2022), WSDM (2023), NLPCC (2021, 2022).