

Jiangjie Chen

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Research Interests

Devoted to reasoning over natural language and making machines being right for the right reasons. Main interested research topics include (but 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 intersect of machine reasoning and text generation, i.e., achieving machine reasoning with the vehicle of natural language, especially with free-text rationales generated by language models.

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 (as honor student) 2014 - 2019

Research Papers

[*: Equal Contribution]

Under Review

1. *Making Language Models Better Planners Toward Specific Goals*
Siyu Yuan*, **Jiangjie Chen***, Ziquan Fu, Xuyang Ge, Jiaqing Liang, Deqing Yang, Yanghua Xiao
In submission.
2. *Factual Error Correction via Iterative Constrained Editing*
Jiangjie Chen*, Rui Xu*, Wenxuan Zeng, Changzhi Sun, Lei Li, Yanghua Xiao
In submission.
3. *Unsupervised Explanation Generation via Correct Instantiations*
Sijie Cheng, Zhiyong Wu, **Jiangjie Chen**, Zhixing Li, Yang Liu, Lingpeng Kong
In submission.

Publications

1. *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).
2. *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*.
3. *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*.
4. *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).
5. *Unsupervised Editing for Counterfactual Stories*
Jiangjie Chen, Chun Gan, Sijie Cheng, Hao Zhou, Yanghua Xiao, Lei Li.
Regular paper, in: *AAAI 2022* (oral).
6. *Diversified Query Generation Guided with Knowledge Graph*
Xinyao Shen, **Jiangjie Chen**, Jiaze Chen, Chun Zeng, Yanghua Xiao.
Long paper, in: *WSDM 2022*.
7. *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*.
8. *Diversified Paraphrase Generation with Commonsense Knowledge Graph*
Xinyao Shen, **Jiangjie Chen**, Yanghua Xiao.
Long paper, in: *NLPCC 2021* (oral).
9. *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*.
10. *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*.
11. *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: Natural Language 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, Natural Language Reasoning

Knowledge Works Lab at Fudan University (Shanghai) Apr. 2017 - Present

- Role: Student Researcher
- Advisor: Yanghua Xiao
- Topics: Text Generation, Natural Language Reasoning, Knowledge Graph

Academic Service

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