JIANGJIE CHEN

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BIOGRAPHY

Jiangjie Chen (陈江捷) is a fourth-year Ph.D. candidate at Fudan University in the School of Computer Science, Shanghai, China. His interested research topics are mostly around **autonomous generative agents**, including (but are not limited to):

- **Autonomous Generative Agents**: Developing advanced methods for autonomous agents that can generate controllable, consistent, and faithful content. This extends towards the exploration of their interactions with multiple agents and real environments.
- **Cognitive Modeling in Language Models**: Focusing on integrating elements from cognitive science into language models, such as the aspects of belief systems, analogical reasoning, Theory-of-Mind, etc. The goal is to augment the understanding of these agents regarding themselves and others, hence enabling them to generate more cognitively-aligned and human-like responses.
- **Reasoning and Strategic Planning**: Advancing research on equipping generative agents with human-level reasoning abilities and strategic planning capabilities. This involves designing and implementing methodologies to incorporate decision-making, counterfactual thinking, and other complex reasoning tasks in generative models.
- **Evaluations and Simulation Environments**: Establishing evaluation frameworks and creating simulation environments to assess the progress of multiple generative agents. These aim to capture the multi-faceted aspects of generative intelligence, from basic belief consistency to advanced reasoning and planning capabilities.

EDUCATION

Fudan University (Shanghai). Ph.D. in School of Computer Science   2019 - 2024 (est.)
- Shanghai Key Laboratory of Data Science, Knowledge Works Laboratory.
- Ph.D. Advisor: Yanghua Xiao.
- Topics: Reasoning and Planning in Language Models, Knowledge-guided Language Generation.

Fudan University (Shanghai). B.S. in School of Computer Science (graduated with *honors*)   2014 - 2019
- Shanghai Key Laboratory of Data Science, Knowledge Works Laboratory.
- Advisor: Yanghua Xiao.
- Topics: Taxonomic Knowledge Graph Construction.

EXPERIENCES

Allen Institute for AI (Seattle, WA, USA)   Jun 2023 - Present
- Role: Research Intern, at Aristo Team
- Manager: Peter Clark
- Mentor: Kyle Richardson
- Responsibilities: Work on multi-agent reasoning and planning with large language models.

UC Santa Barbara (Remote)   Sept 2021 - May 2023
- Role: Visiting Research Intern
- Host: Lei Li
- Responsibilities: Work on machine reasoning over language with large language models.

ByteDance AI Lab (Shanghai, China)   Nov 2019 - May 2023
- Role: Research Intern
- Manager: Lei Li
- Mentors: Lei Li, Hao Zhou, Changzhi Sun, Jiaze Chen
- Responsibilities: Work on knowledge-guided text generation, machine reasoning over language.

Knowledge Works Laboratory at Fudan University (Shanghai, China)   Sept 2019 - Present
- Role: Student Research Leader
- Responsibilities: Lead the research group on natural language generation and reasoning. Mentored near 20 graduate and undergraduate students over the past years. Together, we co-authored and published several research papers, including one that received an Outstanding Paper Award in ACL 2023.

SELECTED AWARDS

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

Selected Publications

[*: Equal Contribution, ♡: Me as Corresponding Author, ♠: Student I Mentored]

[1] **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*.

[2] **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**.

[3] **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**.

[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] **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**.

Other Publications

[*: Equal Contribution, ♡: Me as Corresponding Author, ♠: Student I Mentored]

[6] **Translate Meanings, Not Just Words: IdiomKB' s Role in Optimizing Idiomatic Translation with Language Models**
Shuang Li♠, **Jiangjie Chen**♡, Siyu Yuan♠, Xinyi Wu♠, Hao Yang, Shimin Tao, Yanghua Xiao.
Preprint, 2023.

[7] **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.

[8] **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.

[9] **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

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

[11] **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)**

[12] **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**.

[13] **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**.

[14] **Unsupervised Editing for Counterfactual Stories**
Jiangjie Chen, Chun Gan, Sijie Cheng, Hao Zhou, Yanghua Xiao, Lei Li.
Regular paper, in: **AAAI 2022**.

[15] **Diversified Query Generation Guided with Knowledge Graph**
Xinyao Shen♠, **Jiangjie Chen**, Jiaze Chen, Chun Zeng♠, Yanghua Xiao.

Long paper, in: **WSDM 2022**.

[16] **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**.

[17] **Diversified Paraphrase Generation with Commonsense Knowledge Graph**
Xinyao Shen♠, **Jiangjie Chen**, Yanghua Xiao.
Long paper, in: **NLPCC 2021**.

[18] **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**.

[19] **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**.

[20] **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.)

Academic Services

- Serving as a Program Committee of ACL (2023), EMNLP (2021-), AAAI (2021-), WSDM (2023), NLPCC (2021-), and some corresponding workshops.
- Serving as a Journal Reviewer of TPAMI (2022-), APIN (2022-).
- Served as a Secondary Reviewer of ACL, EMNLP, EACL, KDD, CIKM, SIGIR, etc.