

# Jiaxin Wang

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## Education

### Xi'an Jiaotong University (XJTU)

Ph.D. Student in Computer Science and Technology

Xi'an, China

Sep. 2020 - Present

- Research Interest: Natural Language Processing, Zero/Few-Shot Learning
- Advisor: Prof. Jun Liu

### Northwestern Polytechnical University (NWPU)

M.Eng. in Communication and Information Systems

Xi'an, China

Sep. 2017 - Jun. 2020

- Advisor: Prof. Ruonan Zhang

### Northwestern Polytechnical University (NWPU)

B.Eng. in Electronic Science and Technology

Xi'an, China

Sep. 2013 - Jun. 2017

## Research Experience

### Research 1: Few-shot Relation Triple Extraction[2]

Xi'an Jiaotong University

Sep. 2020 – Nov. 2021

- proposed an innovative joint framework with heterogeneous graph named TGIN for few-shot relational triplet extraction. To our best knowledge, we are the first to introduce a heterogeneous graph network for this task to address the problems of error propagation and data deficiency simultaneously.
- Devised a translation-based graph aggregation and update method to improve the robustness of the model in a few-shot setting.
- Extensive experiments on three public datasets suggested that TGIN achieves a significant improvement of 2.34%–10.74% in terms of accuracy for few-shot relational triple extraction.

### Research 2: Open Relation Extraction[1]

Xi'an Jiaotong University

Nov. 2021 – Present

- Developed a novel prompt-based framework MatchPrompt which enables the model to learn clustering novel relational instances. To our best knowledge, we are the first to introduce a prompt-based framework for unlabeled clustering.
- Provided some interpretability for each cluster.
- Experimented on two public datasets and outperformed other state-of-the-art models.

## Publications

- [1] *MatchPrompt: Prompt-based Open Relation Extraction with Semantic Consistency Guided Clustering.* **Jiaxin Wang**, Lingling Zhang, Jun Liu, Xi Liang, Yujie Zhong, Yaqiang Wu. In *Proceedings of Empirical Methods in Natural Language Processing (EMNLP)*, 2022.
- [2] *TGIN: Translation-Based Graph Inference Network for Few-Shot Relational Triplet Extraction.* **Jiaxin Wang**, Lingling Zhang, Jun Liu, Kunming Ma, Wenjun Wu, Xiang Zhao, Yaqiang Wu, Yi Huang. *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, 2022.
- [3] *TDGI: Translation-Guided Double-Graph Inference for Document-Level Relation Extraction.* Lingling Zhang, Yujie Zhong, Qinghua Zheng, Jun Liu, Qianying Wang, **Jiaxin Wang**, Xiaojun Chang. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, Under Review.
- [4] *DisAVR: Disentangled Adaptive Visual Reasoning Network for Diagram Question Answering.* Yaxian Wang, Bifan Wei, Jun Liu, Lingling Zhang, **Jiaxin Wang**, Qianying Wang. *IEEE Transactions on Image Processing (TIP)*, Under Review.

## Project and Industry Experience

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### Key Technologies and Systems of Hybrid Enhanced Online Education

**Participant**, *National Key Research and Development Program of China*

*Sep. 2020 – Present*

- Responsible for text fragmentation knowledge mining, fusion and application. Meanwhile, guide junior students and coordinate project development.

### Interpretable Reasoning Method of Cross-Media Intelligent Question

#### Answering

**Participant**, *National Natural Science Foundation of China*

*Sep. 2020 – Present*

- Responsible for information extraction, reasoning and fusion.

### Next Generation Bluetooth Communication Protocol

**Research Inter**, *2012 Lab, Huawei Technologies Co., Ltd*

*Feb. 2019 – Jun. 2019*

- Dedicated to developing and promoting international Bluetooth standards for smart wearable devices.

## Service

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**Reviewer** EMNLP 2022, ACL 2022, SIGKDD 2022, AAAI 2022, AAAI 2023, IEEE APCC 2019, IEEE ICC 2019, IoTaaS 2018, Transactions on Information Systems, Data Science and Engineering, Journal of Communications and Networks

## Awards and Honors

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Oct. 2022 The First Academic Scholarship of Xi'an Jiaotong University, every academic year.  
Nov. 2022 Excellent Postgraduate of Xi'an Jiaotong University.  
May. 2020 Outstanding Graduates of Northwestern Polytechnical University (<5%).  
Oct. 2019 The First Prize Scholarship of Northwestern Polytechnical University.  
Dec. 2018 National Scholarship for Postgraduates (<1%).  
Before 2018 The First Prize Scholarship of Northwestern Polytechnical University, Advanced worker in Peer Counseling and Excellent Student Cadre, etc.

## Miscellaneous

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**Sports** Badminton, Jogging  
**Arts** Poetry, Writing  
**Others** Photography, Detective fiction