

Jian Wang

Department of Computing, The Hong Kong Polytechnic University

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🌐 Homepage: <https://iwangjian.github.io>

EDUCATION

The Hong Kong Polytechnic University

PhD in Computer Science

Hong Kong, China

2021/09 – Present

- **Supervisor:** Prof. Maggie Wenjie Li
- **Research Interests:** Conversational AI, Natural Language Processing (NLP), Dialogue Systems

South China University of Technology

MSc in Computer Science and Technology

Guangzhou, China

2017/09 – 2020/06

South China University of Technology

BEng in Computer Science and Engineering

Guangzhou, China

BEc in Finance (Minor degree)

2013/09 – 2017/06

RESEARCH EXPERIENCES

University of Michigan

Visiting PhD Student

Ann Arbor, MI, USA

2024/02 – Present

- Advisor: Prof. Joyce Chai
- Worked on situated dialogue and personalization of LLMs

The Hong Kong Polytechnic University

Research Assistant

Hong Kong, China

2020/11 – 2021/08

- Advisor: Prof. Maggie Wenjie Li
- Worked on Web search clarification and recommendation-oriented dialogue

Rulai Inc.

Research Intern

Campbell, CA, USA (Remotely)

2020/07 – 2020/10

- Advisor: Dr. Yi Zhang
- Worked on Text-to-SQL for task-oriented QA

SIAT, Chinese Academy of Sciences

Visiting Graduate Student

Shenzhen, China

2018/08 – 2019/09

- Advisor: Prof. Min Yang
- Worked on knowledge-grounded and task-oriented dialogue generation

PUBLICATIONS

First-Author Publications:

- **Jian Wang**, Dongding Lin, and Wenjie Li. 2024. Target-constrained Bidirectional Planning for Generation of Target-oriented Proactive Dialogue. *ACM Transactions on Information Systems (TOIS)*.
- **Jian Wang**, Yi Cheng, Dongding Lin, Chak Tou Leong, and Wenjie Li. 2023. Target-oriented Proactive Dialogue Systems with Personalization: Problem Formulation and Dataset Curation. In *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP'2023)*.
- **Jian Wang**, Dongding Lin, and Wenjie Li. 2023. Dialogue Planning via Brownian Bridge Stochastic Process for Goal-directed Proactive Dialogue. In *Findings of the Association for Computational Linguistics: ACL 2023*.

- **Jian Wang**, Dongding Lin, and Wenjie Li. 2023. A Target-Driven Planning Approach for Goal-Directed Dialog Systems. *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*.
- Dongding Lin*, **Jian Wang***, and Wenjie Li. 2023. COLA: Improving Conversational Recommender Systems by Collaborative Augmentation. In *Proceedings of the 37th AAAI Conference on Artificial Intelligence (AAAI'23)*. (*: Equal contribution)
- **Jian Wang** and Wenjie Li. 2021. Template-guided Clarifying Question Generation for Web Search Clarification. In *Proceedings of the 30th ACM International Conference on Information & Knowledge Management (CIKM'21)*.
- **Jian Wang**, Junhao Liu, Wei Bi, Xiaojiang Liu, Kejing He, Ruifeng Xu, and Min Yang. 2020. Dual Dynamic Memory Network for End-to-End Multi-turn Task-oriented Dialog Systems. In *Proceedings of the 28th International Conference on Computational Linguistics (COLING'20)*.
- **Jian Wang**, Junhao Liu, Wei Bi, Xiaojiang Liu, Kejing He, Ruifeng Xu, and Min Yang. 2020. Improving Knowledge-Aware Dialogue Generation via Knowledge Base Question Answering. In *Proceedings of the 34th AAAI Conference on Artificial Intelligence (AAAI'20)*.
- **Jian Wang**, Kejing He, and Min Yang. 2020. Topic Discovery by Spectral Decomposition and Clustering with Coordinated Global and Local Contexts. *International Journal of Machine Learning and Cybernetics (JMLC)*.

Co-Author Publications:

- Yi Cheng, Wenge Liu, **Jian Wang**, Chak Tou Leong, Yi Ouyang, Wenjie Li, Xian Wu, and Yefeng Zheng. 2024. COOPER: Coordinating Specialized Agents towards a Complex Dialogue Goal. In *Proceedings of the 38th AAAI Conference on Artificial Intelligence (AAAI'24)*.
- Chak Tou Leong, Yi Cheng, Jiashuo Wang, **Jian Wang**, and Wenjie Li. 2023. Self-Detoxifying Language Models via Toxication Reversal. In *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP'2023)*.
- Kaishuai Xu, Wenjun Hou, Yi Cheng, **Jian Wang**, and Wenjie Li. 2023. Medical Dialogue Generation via Dual Flow Modeling. In *Findings of the Association for Computational Linguistics: ACL 2023*.
- Kai Guo, **Jian Wang**, and Samuel Kai Wah Chu. 2022. Using Chatbots to Scaffold EFL Students' Argumentative Writing. *Assessing Writing*.
- Gaoshan Wang, **Jian Wang**, and Kejing He. 2022. Majority-to-Minority Resampling for Boosting-based Classification under Imbalanced Data. *Applied Intelligence*.
- Dongding Lin, **Jian Wang**, and Wenjie Li. 2021. Target-guided Knowledge-aware Recommendation Dialogue System: An Empirical Investigation. In *Proceedings of the KaRS and ComplexRec Joint Workshop @ RecSys 2021*.

PROJECTS

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| SMART SPACE | 2022/06 |
| <ul style="list-style-type: none"> ◦ An interactive demo for coffee breaks based on vision, language, and robotics (Led by COMP, PolyU) ◦ Focus on building dialogue agents for human-robot conversations | |
| Multi-skill Dialogue Generation | 2021/05 |
| <ul style="list-style-type: none"> ◦ 2021 Language and Intelligence Challenge: Track 2 (Hosted by Baidu) ◦ Focus on dialogue modeling with multiple skills (knowledge grounding, persona, and recommendation) | |
| Automatic Title Generation for News Articles | 2018/12 |
| <ul style="list-style-type: none"> ◦ Byte Cup 2018 International Machine Learning Contest (Hosted by ByteDance) ◦ Focus on document summarization with a hybrid extractive-abstractive approach | |

HONORS & AWARDS

- Third Prize of 2021 Baidu Language and Intelligence Challenge 2021
- AAAI 2020 Student Scholarship 2020
- First Class of Academic Scholarship at SCUT 2018, 2017
- Third Prize of Byte Cup 2018 International Machine Learning Contest 2018
- Global Ranking of 50/2121 on IEEE Xtreme 11.0 Programming Competition 2017
- National Scholarship (**Top 1%**, the highest scholarship for undergraduates) 2016
- Bronze Medal of 2016 HUAWEI Code Craft (Shenzhen Area Site) 2016
- National Encouragement Scholarship 2015, 2014
- Merit Student of SCUT & Outstanding Student Leader of SCUT-CS 2015, 2014

TEACHING EXPERIENCES

- COMP 6709: Advanced Natural Language Processing, TA, PolyU Spring 2023, 2022
- COMP 2021: Object-Oriented Programming, TA, PolyU Fall 2022, 2021
- Design and Analysis of Algorithms, TA, SCUT Spring, 2018
- Advanced Programming Language (C++), TA, SCUT Fall, 2017

ACADEMIC SERVICES

- Reviewer for ACL Rolling Review (ARR)
- Conference Reviewer: ACL (2023), EMNLP (2022, 2023), COLING (2020, 2022)

TECHNICAL SKILLS

- Language: Chinese (Native), English (Fluent)
- Coding: Python, C/C++, Java, Shell, SQL, HTML, CSS, JavaScript
- Tools: PyTorch, Tensorflow, Git, Docker, LaTeX, Markdown, Vim