Danqing Wang

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Research Interest: Developing generative AI to benefit human life. Mainly focus on (but not limited to):
- Reasoning and Planning, Multi-agent Collaboration
- AI for Drug Discovery: Peptide Design, Antibody Discovery, etc.

Github: *https://github.com/dqwang122*
Scholar: *Google Scholar*, *Semantic Scholar*

Education

2024 – Current	**PhD in Language Technologies Institute**, *Carnegie Mellon University* Advisor: Prof. Lei Li
2022 – 2023	**PhD in Computer Science**, *UC, Santa Barbara (Transferred)* Advisor: Prof. Lei Li
2018 – 2021	**Master in Computer Science**, *Fudan Univerisity* Advisor: Prof. Xipeng Qiu and Prof. Xuanjing Huang
2014 – 2018	**Bachelor in Computer Science and Technology**, *Fudan Univerisity*

Experience

2025.5 – Current	**Research Scientist Intern**, *Meta AI (FAIR)* **Mentor**: Ansong Ni, Asli Celikyilmaz **Topic**: Multi-agent Communication
2024.3 – 2024.5	**Research Scientist Intern**, *Alibaba (Team Qwen)* **Mentor**: Jianxin Ma **Topic**: LLM Reasoning **Publication**: *TypedThinker: Typed Thinking Improves Large Language Model Reasoning, ICLR 2025*
2023.6 – 2024.1	**Research Scientist Intern**, *Meta AI (FAIR)* **Mentor**: Yuandong Tian **Topic**: Personalized Alignment in LLMs **Publication**: *Learning Personalized Alignment for Evaluating Open-ended Text Generation, EMNLP 2024*
2020.4 – 2022.8	**Research Scientist**, *ByteDance Research (AI Lab)* **Mentor**: Jiaze Chen, Hao Zhou, and Lei Li **Topic**: Text Generation, AI for Drug Design **Publication**: *Accelerating Antimicrobial Peptide Discovery with Latent Structure, KDD 2023* *On Pre-training Language Model for Antibody, ICLR 2023* *Contrastive Aligned Joint Learning for Multilingual Summarization, ACL 2021 Findings*

Publications

Preprint	**[1] Strategic Planning and Rationalizing on Trees Make LLMs Better Debaters**✿ *Danqing Wang*, Zhuorui Ye*, Xinran Zhao*, Fei Fang, Lei Li*
Preprint	**[2] RARE: Retrieval-Aware Robustness Evaluation for Retrieval-Augmented Generation Systems**✿, *(Amazon-CMU LLM RAG project)* *Yixiao Zeng, Tianyu Cao, Danqing Wang, Xinran Zhao, Zimeng Qiu, Morteza Ziyadi, Tongshuang Wu, Lei Li*
Preprint	**[3] Cooperative Strategic Planning Enhances Reasoning Capabilities in Large Language Models**✿ *Danqing Wang, Zhuorui Ye, Fei Fang, Lei Li*
ICLR 2025	**[4] TypedThinker: Typed Thinking Improves Large Language Model Reasoning**✿ *Danqing Wang, JianXin Ma, Fei Fang, Lei Li*
NAACL 2025	**[5] Scaling LLM Inference with Optimized Sample Compute Allocation**✿ *Kexun Zhang*, Shang Zhou*, Danqing Wang, William Yang Wang, Lei Li*
EMNLP 2024	**[6] Learning Personalized Alignment for Evaluating Open-ended Text Generation**✿ *Danqing Wang, Kevin Yang, Hanlin Zhu, Xiaomeng Yang, Andrew Cohen, Lei Li, Yuandong Tian*

KDD 2024	**[7] Global Human-guided Counterfactual Explanations for Molecular Properties via Reinforcement Learning** % *Danqing Wang*, Antonis Antoniades*, Kha-Dinh Luong, Edwin Zhang, Mert Kosan, Jiachen Li, William Yang Wang, Ambuj Singh, Lei Li*
EMNLP 2023	**[8] Learning from Mistakes via Cooperative Study Assistant for Large Language Models** % *Danqing Wang, Lei Li*
EMNLP 2023	**[9] Instructscore: Towards Explainable Text Generation Evaluation with Automatic Feedback** % *Wenda Xu, Danqing Wang, Liangming Pan, Zhenqiao Song, Markus Freitag, William Yang Wang, Lei Li*
NeurIPS 2023	**[10] ALGO: Synthesizing Algorithmic Programs with Generated Oracle Verifiers** % *Kexun Zhang, Danqing Wang, Jingtao Xia, William Yang Wang, Lei Li*
ICLR 2023	**[11] On Pre-training Language Model for Antibody** % *Danqing Wang, Fei Ye, Hao Zhou*
KDD 2023	**[12] Accelerating Antimicrobial Peptide Discovery with Latent Structure** % *Danqing Wang, Zeyu Wen, Fei Ye, Lei Li, Hao Zhou*
NAACL 2022 Findings	**[13] MTG: A Benchmark Suite for Multilingual Text Generation** % *Yiran Chen, Zhenqiao Song, Xianze Wu, Danqing Wang, Jingjing Xu, Jiaze Chen, Hao Zhou, Lei Li*
NLPCC 2021	**[14] CNewSum: A Large-scale Chinese News Summarization Dataset with Human-annotated Adequacy and Deducibility Level** % *Danqing Wang, Jiaze Chen, Xianze Wu, Hao Zhou, Lei Li*
AAAI 2021	**[15] Enhancing Scientific Papers Summarization with Citation Graph** % *Chenxin An, Ming Zhong, Yiran Chen, Danqing Wang, Xipeng Qiu, Xuanjing Huang*
ACL 2021 Finding	**[16] Contrastive Aligned Joint Learning for Multilingual Summarization** % *Danqing Wang, Jiaze Chen, Hao Zhou, Xipeng Qiu, Lei Li*
ACL 2020	**[17] Heterogeneous Graph Neural Networks for Extractive Document Summarization** % *Danqing Wang*, Pengfei Liu*, Yining Zheng, Xipeng Qiu and Xuanjing Huang*
ACL 2020	**[18] Extractive Summarization as Text Matching** % *Ming Zhong*, Pengfei Liu*, Yiran Chen, Danqing Wang, Xipeng Qiu and Xuanjing Huang*
ACL 2019	**[19] Searching for Effective Neural Extractive Summarization: What Works and What's Next** % *Ming Zhong*, Pengfei Liu*, Danqing Wang, Xipeng Qiu, Xuanjing Huang*

Academic Services

- Program Committee of ICML, ICLR, NeurIPS, ACL, EMNLP, NAACL, AAAI, KDD
- TA for CS190I Deep Learning (Winter 2023) and CS165B Machine Learning (Spring 2023)
- Local Organization Chair of Socal NLP Symposium 2022

Honor

2022	Academic Excellence Fellowship
2021	Shanghai Outstanding Graduates (5% of graduates)
2020	Venustech Scholarship (1% of Fudan students)
2019	Scholarship for Outstanding Students (First Prize)
2017	Fudan's Undergraduate Research Opportunities Program