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*, *LinkedIn*

Education

2024 – Current **PhD in Language Technologies Institute**, *Carnegie Mellon University*
Advisor: Prof. Lei Li (Expected Graduation: June 2027)

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 – 2025.10 **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

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Publications

Preprint **[1] Learning to Interrupt in Language-based Multi-agent Communication**⸜
Danqing Wang, Da Yin, Ruta Mehta, Lei Li, Asli Celikyilmaz, and Ansong Ni

Preprint **[2] Is Vibe Coding Safe? Benchmarking Vulnerability of Agent-Generated Code in Real-World Tasks**⸜
Songwen Zhao, Danqing Wang, Kexun Zhang, Jiaxuan Luo, Zhuo Li, Lei Li

Preprint **[3] Strategic Planning and Rationalizing on Trees Make LLMs Better Debaters**⸜
Danqing Wang*, Zhuorui Ye*, Xinran Zhao*, Fei Fang, Lei Li

Preprint **[4] 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 **[5] Cooperative Strategic Planning Enhances Reasoning Capabilities in Large Language Models**⸜
Danqing Wang, Zhuorui Ye, Fei Fang, Lei Li

ICLR 2025	**[6] TypedThinker: Typed Thinking Improves Large Language Model Reasoning**✂ *Danqing Wang, JianXin Ma, Fei Fang, Lei Li*
NAACL 2025	**[7] Scaling LLM Inference with Optimized Sample Compute Allocation**✂ Kexun Zhang*, Shang Zhou*, <u>Danqing Wang</u>, William Yang Wang, Lei Li
EMNLP 2024	**[8] 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	**[9] Global Human-guided Counterfactual Explanations for Molecular Properties via Reinforcement Learning** ✂ <u>*Danqing Wang*</u>*, Antonis Antoniades*, Kha-Dinh Luong, Edwin Zhang, Mert Kosan, Jiachen Li, William Yang Wang, Ambuj Singh, Lei Li*
EMNLP 2023	**[10] Learning from Mistakes via Cooperative Study Assistant for Large Language Models** ✂ <u>*Danqing Wang*</u>*, Lei Li*
EMNLP 2023	**[11] Instructscore: Towards Explainable Text Generation Evaluation with Automatic Feedback** ✂ *Wenda Xu, <u>Danqing Wang</u>, Liangming Pan, Zhenqiao Song, Markus Freitag, William Yang Wang, Lei Li*
NeurIPS 2023	**[12] ALGO: Synthesizing Algorithmic Programs with Generated Oracle Verifiers** ✂ *Kexun Zhang, <u>Danqing Wang</u>, Jingtao Xia, William Yang Wang, Lei Li*
ICLR 2023	**[13] On Pre-training Language Model for Antibody** ✂ <u>*Danqing Wang*</u>*, Fei Ye, Hao Zhou*
KDD 2023	**[14] Accelerating Antimicrobial Peptide Discovery with Latent Structure** ✂ <u>*Danqing Wang*</u>*, Zeyu Wen, Fei Ye, Lei Li, Hao Zhou*
NAACL 2022 Findings	**[15] MTG: A Benchmark Suite for Multilingual Text Generation** ✂ *Yiran Chen, Zhenqiao Song, Xianze Wu, <u>Danqing Wang</u>, Jingjing Xu, Jiaze Chen, Hao Zhou, Lei Li*
NLPCC 2021	**[16] CNewSum: A Large-scale Chinese News Summarization Dataset with Human-annotated Adequacy and Deducibility Level** ✂ <u>*Danqing Wang*</u>*, Jiaze Chen, Xianze Wu, Hao Zhou, Lei Li*
AAAI 2021	**[17] Enhancing Scientific Papers Summarization with Citation Graph** ✂ *Chenxin An, Ming Zhong, Yiran Chen, <u>Danqing Wang</u>, Xipeng Qiu, Xuanjing Huang*
ACL 2021 Finding	**[18] Contrastive Aligned Joint Learning for Multilingual Summarization** ✂ <u>*Danqing Wang*</u>*, Jiaze Chen, Hao Zhou, Xipeng Qiu, Lei Li*
ACL 2020	**[19] Heterogeneous Graph Neural Networks for Extractive Document Summarization** ✂ <u>*Danqing Wang*</u>*, Pengfei Liu*, Yining Zheng, Xipeng Qiu and Xuanjing Huang*
ACL 2020	**[20] Extractive Summarization as Text Matching** ✂ *Ming Zhong*, Pengfei Liu*, Yiran Chen, <u>Danqing Wang</u>, Xipeng Qiu and Xuanjing Huang*
ACL 2019	**[21] Searching for Effective Neural Extractive Summarization: What Works and What's Next** ✂ *Ming Zhong*, Pengfei Liu*, <u>Danqing Wang</u>, 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

2025	Amazon AI PhD Fellowship
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