Qianyu He

qyhe21@m.fudan.edu.cn | +8617717090020 | https://abbey4799.github.io/

Research Interests

Qianyu He (何千羽) is currently a fourth-year PhD candidate at Fudan University in the School of Computer Science. Her research interests primarily focus on enhancing the fundamental **reasoning and instruction following capabilities** of large language models (LLMs):

- **Reasoning Model**: Advancing research on incentivizing and understanding LLMs' complex reasoning abilities.
- **Instruction Following**: Developing advanced methods for LLMs to follow complex instructions, ensuring more reliable human-LLMs interactions, and empowering autonomous completion of complex real-world tasks.

Education

Fudan University (Shanghai) 2021 – 2026 (estimated)
Ph.D. in School of Computer Science

Fudan University (Shanghai) 2017 – 2021
B.S. in School of Computer Science

Experience

ByteDance Seed-LLM-Horizon 2024.11 – Present
- Role: Research Intern
- Advisor: Dr. Mingxuan Wang
- Topics: Reasoning Model, Long Chain-of-thought [1][2][11]
- Projects: Seed-Thinking-v1.5 (**Github Star: 700+**), Doubao-1.5-pro-AS1-Preview

StepFun Foundation Model Group 2024.05 – 2024.10
- Role: Research Intern
- Advisor: Dr. Jie Yan
- Topics: LLMs Reasoning, Generative Reward Model

Knowledge Works Lab at Fudan University 2021.03 – Present
- Role: Student Research Leader
- Advisor: Prof. Yanghua Xiao
- Topics: Instruction Following [4][5][6][7], LLMs Reasoning [15], Creative Generation [7][8][9]

Selected Awards

First-Class Academic Scholarship for Doctoral Students 2024
Intel Fellowship (5 Ph.D. candidates in Fudan University) 2023
Venustech Scholarship 2022
Outstanding Graduate in Shanghai (Top 5%) 2021
Chinese National Scholarship (Top 1%) 2020

Selected Publications

(indicates equal contribution, ♣ indicates Student She Mentored)*

[1] ENIGMATA: Scaling Logical Reasoning in Large Language Models with Synthetic Verifiable Puzzles Technical Report 2025

Qianyu He as a **core contributor**. The project contributes to the Logical Reasoning Capabilities for **Seed-Thinking-v1.5.**

[2] Seed-Thinking-v1.5: Advancing Superb Reasoning Models with Reinforcement Learning Technical Report 2025

Qianyu He as a contributor to **Logical Reasoning Capabilities for Seed-Thinking-v1.5**

[3] **Think Thrice Before You Act: Progressive Thought Refinement in Large Language Models** ICLR 2025

Chengyu Du, Jinyi Han, Yizhou Ying, Aili Chen, **Qianyu He**, Haokun Zhao, Sirui Xia, Haoran Guo, Jiaqing Liang, Zulong Chen, Liangyue Li, Yanghua Xiao

[4] **Step-by-Step Mastery: Enhancing Soft Constraint Following Ability of Large Language Models** ACL 2025 Findings

Qingyu Ren♣, Jie Zeng♣, **Qianyu He**, Jiaqing Liang, Yanghua Xiao, Weikang Zhou, Zeye Sun, Fei Yu

[5] **Order Matters: Investigate the Position Bias in Multi-constraint Instruction Following** ACL 2025 Findings

Jie Zeng♣, **Qianyu He**, Qingyu Ren♣, Jiaqing Liang, Yanghua Xiao, Weikang Zhou, Zeye Sun, Fei Yu

[6] **From Complex to Simple: Enhancing Multi-Constraint Complex Instruction Following Ability of Large Language Models** EMNLP 2024 Findings

Qianyu He*, Jie Zeng*♣, Qianxi He♣, Jiaqing Liang, Yanghua Xiao

[7] **Can Large Language Models Understand Real-World Complex Instructions?** AAAI 2024

Qianyu He, Jie Zeng♣, Wenhao Huang, Lina Chen, Jin Xiao♣, Qianxi He♣, Xunzhe Zhou, Jiaqing Liang, Yanghua Xiao

Adopted by Hunyuan-Thinker-1-Preview for Instruction Following Capabilities evaluation

[8] **HAUSER: Towards Holistic and Automatic Evaluation of Simile Generation** ACL 2023 **Oral**

Qianyu He, Yikai Zhang, Jiaqing Liang, Yuncheng Huang♣, Yanghua Xiao, Yunwen Chen

[9] **MAPS-KB: A Million-scale Probabilistic Simile Knowledge Base** AAAI 2023

Qianyu He, Xintao Wang, Jiaqing Liang, Yanghua Xiao

[10] **Can Pre-trained Language Models Interpret Similes as Smart as Human?** ACL 2022

Qianyu He*, Sijie Cheng*, Zhixu Li, Rui Xie, Yanghua Xiao.

Other Publications

(indicates equal contribution, ♣ indicates Student She Mentored)*

[11] **KORGym: A Dynamic Game Platform for LLM Reasoning Evaluation** Technical Report 2025

Qianyu He as a contributor to **Puzzle Reasoning Data Curation**

[12] **Order Doesn't Matter, But Reasoning Does: Training LLMs with Order-Centric Augmentation** Preprint 2025

Qianxi He♣, **Qianyu He**, Jiaqing Liang, Yanghua Xiao, Weikang Zhou, Zeye Sun, Fei Yu

[13] **QUILL: Quotation Generation Enhancement of Large Language Models** Preprint 2025

Jin Xiao♣, Bowei Zhang, **Qianyu He**, Jiaqing Liang, Feng Wei, Jinglei Chen, Zujie Liang, Deqing Yang, Yanghua Xiao

[14] **Laying the Foundation First? Investigating the Generalization from Atomic Skills to Complex Reasoning Tasks** Preprint 2024

Yuncheng Huang♣, **Qianyu He**, Yipei Xu, Jiaqing Liang, Yanghua Xiao

[15] **Enhancing Quantitative Reasoning Skills of Large Language Models through Dimension Perception** ICDE 2024

Yuncheng Huang♣, **Qianyu He**, Jiaqing Liang, Sihang Jiang, Yanghua Xiao, Yunwen Chen

[16] **Reason from Fallacy: Enhancing Large Language Models' Logical Reasoning through Logical Fallacy Understanding** NAACL 2024 Findings

Yanda Li, Dixuan Wang, Jiaqing Liang, Deqing Yang, Guochao Jiang, **Qianyu He**, Yanghua Xiao

[17] **Small Model Can Self-correct** AAAI 2024

Jinyi Han, Jiaqing Liang, Jie Shi, **Qianyu He**, Yanghua Xiao

[18] **Light Up the Shadows: Enhance Long-Tail Entity Grounding with Concept-Guided Vision-Language Models** ACL 2024 Findings

Yikai Zhang, **Qianyu He**, Xintao Wang, Siyu Yuan, Jiaqing Liang, Yanghua Xiao

[19] **Is There a One-Model-Fits-All Approach to Information Extraction? Revisiting Task Definition Biases** ACL 2024 Findings

Wenhao Huang, **Qianyu He**, Zhixu Li, Jiaqing Liang, Yanghua Xiao

[20] **A Context-Enhanced Generate-then-Evaluate Framework for Chinese Abbreviation Prediction** CIKM 2023

Hanwen Tong, Chenhao Xie, Jiaqing Liang, **Qianyu He**, Zhiang Yue, Jingping Liu, Yanghua Xiao, Wenguang Wang

[21] **BBT-Fin: Comprehensive Construction of Chinese Financial Domain Pre-trained Language Model, Corpus and Benchmark** Preprint 2023

Dakuan Lu, Jiaqing Liang, Yipei Xu, **Qianyu He**, Yipeng Geng, Mengkun Han, Yingsi Xin, Hengkui Wu, Yanghua Xiao

[22] **Language Models as Knowledge Embeddings** IJCAI 2022

Xintao Wang, **Qianyu He**, Jiaqing Liang, Yanghua Xiao