

Gaole He

Curriculum Vitae

Latest Update: Nov-19-2025

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↗ richardhgl.github.io/

Research Interests

My current research focuses on:

- Exploring how humans can collaborate with **Large Language Models (LLMs)** in an agentic workflow to boost work efficiency
- Designing effective explanation methods (e.g., using **analogy**) and explanation communication (e.g., **conversation**) to facilitate human-AI collaboration
- Knowledge Graph Reasoning and Natural Language Processing
- Analyzing user factors (e.g., **cognitive bias**) in shaping **trust and reliance** in human-AI collaboration

Education Qualifications

- Jul 2021 - **PhD**, Computer Science, Delft University of Technology, Delft, Netherlands.
Oct 2025 Supervised by [Ujwal Gadiraju](#) and [Geert-Jan Houben](#).
Topics: Human-AI Collaboration, Human-centered XAI
- 2018 - 2021 **M.Eng.**, Computer Science, Renmin University of China, Beijing, China, supervised by [Wayne Xin Zhao](#) and [Ji-Rong Wen](#).
Topics: Knowledge Base, Natural Language Processing, Deep Learning
- 2014 - 2018 **B.Eng.**, Computer Science and Mathematics (minor), Renmin University of China, Beijing, China, supervised by [Wayne Xin Zhao](#).
Topics: Network Embedding, Recommender System

Academic Experience

Work Experience

- Nov 2025 - Research Fellow at School of Computing, National University of Singapore.
Now Collaborating PI: [Brian Lim](#)
- June 2025 - Applied Scientist Intern at Stores Foundational AI - Neo, Amazon (Seattle).
Sep 2025 Mentor: [Yichuan Li](#), [Daheng Wang](#), and [Besnik Fetahu](#). Production job: training LLMs to learn user preferences.
- Feb 2024 - Visiting PhD Researcher, supervised by [Gianluca Demartini](#) in The ARC Centre
May 2024 for Information Resilience (Cires), the University of Queensland (UQ). Plan-
then-execute LLM Agents - CHI'25 publication.
- Nov 2019 - Research Assistant, supervised by [Jing Jiang](#), [Yunshi Lan](#) in Living Analytics
Aug 2020 Research Center (LARC), Singapore Management University (SMU). Retrieval-
based KBQA - WSDM'21 publication.

Teaching Experience

- CS4145, [Crowd Computing](#), master course, guest lecturer, 2024.

- CS4360, [Natural Language Processing](#), master course, teaching assistant, 2023.
- CS4145, [Crowd Computing](#), master course, teaching assistant, 2022, 2023.
- IN4326, [Seminar Web Information Systems](#), master course, teaching assistant, 2022, 2023.
- Master thesis supervisor. Every year, I mentor at least two master students for thesis projects (around 9 months). The mentorship includes weekly meetings, technical support, and academic writing. Some excellent work will finally result in a top-tier conference/journal publication. 2022- Now
- Student supervisor for Turing class of Information School, Renmin University of China, 2018 - 2020

[Professional Service](#)

- PC: CSCW 2026; AC: CHI 2025 LBW
- Reviewer/sub-reviewer: CHI, CSCW, IUI, WWW, KDD, SIGIR, CCL, HCOMP, DIS
- Journal Reviewer: CSUR, TOCHI, TiiS, JAIR, Neural Networks, IP & M, IJHCI, IJHCS, Science China
- Workshop Organizer: CSCW 2023 Workshop on Understanding and Mitigating Cognitive Biases in Human-AI Collaboration

[Selected Publications](#)

* indicates equal contribution. Only selected papers are presented here. Several leading papers about human-AI collaboration with LLMs are still under review. For full list, please refer to my [google scholar page](#).

[Work in Progress](#)

Gaole He, Patrick Hemmer, Michael Vössing, Max Schemmer, Ujwal Gadiraju. Fine-grained Appropriate Reliance: Human-AI Collaboration with A Multi-step Transparent Decision Workflow for Complex Task Decomposition.

[Conference Papers](#)

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|----------------|--|
| CHI 2025 | Gaole He , Gianluca Demartini, Ujwal Gadiraju. Plan-Then-Execute: An Empirical Study of User Trust and Team Performance When Using LLM Agents As A Daily Assistant. |
| IUI 2025 | Gaole He , Nilay Aishwarya, Ujwal Gadiraju. Is Conversational XAI All You Need? Human-AI Decision Making With a Conversational XAI Assistant. |
| HyperText 2024 | Gaole He , Abri Bharos, Ujwal Gadiraju. To Err Is AI! Debugging as an Intervention to Facilitate Appropriate Reliance on AI Systems. |
| CSCW 2023 | Gaole He* , Stefan Buijsman*, Ujwal Gadiraju. How Stated Accuracy of an AI System and Analogies to Explain Accuracy Affect Human Reliance on the System. |
| CHI 2023 | Gaole He , Lucie Kuiper, Ujwal Gadiraju. Knowing About Knowing: An Illusion of Human Competence Can Hinder Appropriate Reliance on AI Systems. |

- HCOMP 2022 **Gaole He**, Agathe Balayn, Stefan Buijsman, Jie Yang, Ujwal Gadiraju. It Is Like Finding a Polar Bear in the Savannah! Concept-level AI Explanations with Analogical Inference from Commonsense Knowledge. **Best Paper Award**.
- WWW 2022 Agathe Balayn*, **Gaole He***, Andrea Hu*, Jie Yang, Ujwal Gadiraju. Ready Player One! Eliciting Diverse Knowledge Using A Configurable Game. **Best Paper Award Finalist (3.4% of accepted papers)**, **honorable nomination**.
- IJCAI 2021 Yunshi Lan*, **Gaole He***, Jinhao Jiang, Jing Jiang, Wayne Xin Zhao, Ji-Rong Wen. A Survey on Complex Knowledge Base Question Answering: Methods, Challenges and Solutions.
- WSDM 2021 **Gaole He**, Yunshi Lan, Jing Jiang, Wayne Xin Zhao and Ji-Rong Wen. Improving Multi-hop Knowledge Base Question Answering by Learning Intermediate Supervision Signals.
- WWW 2020 **Gaole He**, Junyi Li, Wayne Xin Zhao, Peiju Liu and Ji-Rong Wen. Mining Implicit Entity Preference from User-Item Interaction Data for Knowledge Graph Completion via Adversarial Learning.
- Journal Papers**
- JAIR 2024 **Gaole He**, Agathe Balayn, Stefan Buijsman, Jie Yang, Ujwal Gadiraju. Opening the Analogical Portal to Explainability: Can Analogies Help Laypeople in AI-assisted Decision Making?
- TKDE 2022 Yunshi Lan*, **Gaole He***, Jinhao Jiang, Jing Jiang, Wayne Xin Zhao and Ji-Rong Wen. Complex Knowledge Base Question Answering: A Survey.

Selected Honors, Awards, & Recognitions

- Heidelberg Laureate Forum Young Researcher, 2023
- Gary Marsden Travel Award, CHI 2023
- Best Paper Award, HCOMP 2022
- Best Paper Award Finalist, WWW 2022
- Toloka Best Poster/Demo Award, HCOMP 2021
- Excellent Graduate in Beijing (Highest honor for graduate set by the government of Beijing), 2021
- JingDong Scholarship, 2020
- First-Class scholarship for postgraduate student, 2018, 2019
- American College Mathematical Modeling Contest Meritorious Winner, 2016
- The top scorer of science (#1) in the college entrance exam (Gaokao) in Zhong County, Chongqing, 2014

Open Sourced Project

I keep the habit of sharing the data and code in my research projects / published papers on Github. Please refer to my [Github](#) homepage for my projects. I list some representative projects as following:

- Neural State Machine in KBQA (139 star on Github). Role: main developer.

- [KB4Rec](#) (330 star on Github). Role: main developer.
- [TextBox](#) (1.1 k star on Github). Role: main developer in initial version.
- [Plan-then-execute LLM agent Demo for human-AI collaboration](#). Role: main developer.