

QIYUAN ZHANG

Ph.D. Student, City University of Hong Kong

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EDUCATION

- City University of Hong Kong** Jan. 2023 – Present
Ph.D. in Computer Science (Advisor: Prof. Chen Ma) Hong Kong
- University of Electronic Science and Technology of China** Sep. 2019 – Jun. 2022
M.Sc. in Computer Science Chengdu, China
- University of Electronic Science and Technology of China** Sep. 2015 – Jun. 2019
B.Sc. in Computer Science Chengdu, China

RESEARCH EXPERIENCE

- Test-time Scaling in LLMs** Feb. 2025 – Present
Ph.D. Research Hong Kong
 - What, How, Where, and How Well? A Survey on Test-Time Scaling in Large Language Models:** Introduced a novel and hierarchical taxonomy with 4 orthogonal dimensions for deconstructing existing Test-time Scaling literature and provided hands-on guidelines for beginners.
- Evaluation for LLMs** Jun. 2023 – Present
Ph.D. Research Hong Kong
 - Collaborative Performance Prediction for LLMs:** Introduced a novel method for predicting LLM performance across different tasks using a multi-model benchmark matrix. Discovered new performance predictors beyond computational scaling laws.
 - Improving Evaluation via Response-Adapted References:** Developed REVISEVAL, a technique that generates response-adapted references, significantly enhancing evaluation reliability.
 - Unlocking Test-time Scaling in LLM-as-a-Judge:** Proposed a crowd-based comparative evaluation technique that leverages additional responses to improve LLM-as-a-Judge accuracy.
- Mathematical Reasoning** Jul. 2019 – Jul. 2021
M.Sc. Research (Collaborator: Lei Wang) Chengdu, China
 - Explainable Mathematical Reasoning in Conversational QA:** Created a dataset combining multi-step conversational QA with interpretable reasoning graphs for improved mathematical reasoning.
 - Toolkit for Math Word Problem Solving:** Developed an open-source framework that became widely used in the research community for mathematical problem-solving.

PUBLICATIONS

- Qiyuan Zhang, Fuyuan Lyu, et al., “What, How, Where, and How Well? A Survey on Test-Time Scaling in Large Language Models”, ArXiv:2503.24235 (Under Review at COLM 2025).
- Qiyuan Zhang, Yufei Wang, et al., “Crowd Comparative Reasoning: Unlocking Comprehensive Evaluations for LLM-as-a-Judge”, ACL 2025.
- Qiyuan Zhang, Yufei Wang et al., “REVISEVAL: Improving LLM-as-a-Judge via Response-Adapted References”, ICLR (Poster), 2025.
- Qiyuan Zhang, Fuyuan Lyu, Xue Liu, Chen Ma, “Collaborative Performance Prediction for Large Language Models”, EMNLP, 2024.
- Qiyuan Zhang, Chen Ma, “Active Instruction Tuning for Large Language Models with Reference-Free Instruction Selection”, PAKDD, 2024.
- Qiyuan Zhang, Lei Wang et al., “NOAHQA: Numerical Reasoning with Interpretable Graph Question Answering Dataset”, EMNLP (Findings), 2021.
- Yihuai Lan, Lei Wang, Qiyuan Zhang et al., “MWPToolkit: An Open-Source Framework for Deep Learning-Based Math Word Problem Solvers”, AAAI Workshop, 2021.