

Yizhang ZHU

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EDUCATION

The Hong Kong University of Science and Technology (Guangzhou) Ph.D. Student in Data Science and Analytics Supervisor: Prof. Yuyu LUO	2025.09 - Present
The Hong Kong University of Science and Technology (Guangzhou) M.Phil. in Data Science and Analytics Supervisor: Prof. Yuyu LUO	2023.09 - 2025.07
Chongqing University B.Eng. in Computer Science and Technology	2019.09 - 2023.06

EXPERIENCE

Tsinghua University Visiting Student in Database Group, Department of Computer Science and Technology Supervisor: Prof. Guoliang LI	2025.06 - 2025.09
National University of Singapore Chongqing Research Institute Visiting Student in Computer Engineering Joint Program Supervisor: Prof. Yung Chii LIANG	2022.09 - 2023.05

PUBLICATIONS

A Survey of Data Agents: Emerging Paradigm or Overstated Hype? Yizhang ZHU, Liangwei WANG, Chenyu YANG, <i>et al.</i> , Guoliang LI, Yuyu LUO Preprint (Survey)	Link 
EllieSQL: Cost-Efficient Text-to-SQL with Complexity-Aware Routing Yizhang ZHU, Runzhi JIANG, Boyan LI, Nan TANG, Yuyu LUO Conference on Language Modeling (COLM 2025)	Link 
Are Large Language Models Good Statisticians? Yizhang ZHU, Shiyin DU, Boyan LI, Yuyu LUO, Nan TANG Advances in Neural Information Processing Systems (NeurIPS 2024)	Link 
LEAD: Iterative Data Selection for Efficient LLM Instruction Tuning Xiaotian LIN, Yanlin QI, Yizhang ZHU, Themis Palpanas, Chengliang CHAI, Nan TANG, Yuyu LUO International Conference on Very Large Data Bases (VLDB 2026)	Link 
RAMer: Reconstruction-based Adversarial Model for Multi-party Multi-modal Multi-label Emotion Recognition Xudong YANG, Yizhang ZHU, Nan TANG, Yuyu LUO International Joint Conference on Artificial Intelligence (IJCAI 2025)	Link 
Boosting Text-to-Chart Retrieval through Training with Synthesized Semantic Insights Yifan WU, Lutao YAN, Yizhang ZHU, Yinan MEI, Jiannan WANG, Nan TANG, Yuyu LUO Under Review	Link 
AskChart: Universal Chart Understanding through Textual Enhancement Xudong YANG, Yifan WU*, Yizhang ZHU*, Nan TANG, Yuyu LUO Under Review	Link 
SRAG: Structured Retrieval-Augmented Generation for Multi-Entity Question Answering over Wikipedia Graph Teng LIN, Yizhang ZHU, Yuyu LUO, Nan TANG Under Review	Link 

Goldman: Reading the Fed, Riding the Trend in Gold Markets with Multi-Agent LLMs

[Link](#)

Qiqi DUAN, Changlun LI, Yao SHI, Yizhang ZHU, Nan TANG, Yuyu LUO

Under Review

Concise Math Reasoning via Difficulty-Aware Distillation

[Link](#)

Yifan WU, Jingze SHI, Bingheng WU, Jiayi ZHANG, Xiaotian LIN, Yizhang ZHU, *et al.*, Yuyu LUO

Under Review

PROJECTS

DeepEye - Core Developer

[Link](#)

Visual Workflow Data Agent System (AI Agent 2025 Best Open-Source Project)

- Developed a visual workflow data agent system to enable transparent and flexible data analysis.
- Designed a drag-and-drop workflow engine supporting zero-code editing and granular management, allowing users to visually build, debug, and monitor every step of the analysis pipeline in real-time.
- Implemented agentic workflow orchestration with multiple modes (ReAct, Planner-and-Executor, ReWOO, etc.), backed by a domain knowledge base for precise business logic alignment.

GNN4SL - Project Leader

[Link](#)

LLM-Enhanced Semantic-Aware Graph Learning for Schema Linking in NL2SQL

- Reformulated schema linking as a graph link prediction problem, fusing LLM-generated semantic embeddings with GNN structural learning (GCN, GAT, RGAT) to align queries with schema elements.
- Constructed graph-structured datasets based on Spider and Bird benchmarks to validate the effectiveness and efficiency in capturing complex schema relationships.

FUNDINGS AND AWARDS

AI Agent 2025 Competition - <i>Best Open-source Project Award</i>	2025.10
HKUST(GZ) Ph.D. Student Fellowship	2025.09
Data Science and Analytics Thrust Volunteer Grant	2025.05
Greater Bay Area CS Academic Poster Competition - <i>Most Popular Poster Award</i>	2025.03
HKUST(GZ) Red Bird M.Phil. Studentship	2023.09
Excellent Graduates of Chongqing University	2023.06
Comprehensive Scholarship of Chongqing University	2022.09
National Mathematical Contest of Modeling - <i>First Prize in Chongqing</i>	2021.10
National Undergraduate Innovation and Entrepreneurship Project - <i>¥50,000 funding</i>	2021.05

ACADEMIC ACTIVITIES

Talks & Seminars:

- Huawei Squirrel Webinar (Invited) - *A Survey of Data Agents: Emerging Paradigm or Overstated Hype?*
- HKUST(GZ) RBM Project Roadshow - *Towards Automated Statistical Analysis: The Role of LLMs*

Teaching Assistant:

- DSAA6100: Data-centric AI Practical Lab (Master's Level), HKUST(GZ)

Academic Services: NeurIPS 2025 Reviewer

SKILLS

English Proficiency: IELTS: 7.0 (Listening: 7.5, Reading: 8.5, Speaking: 6, Writing: 6.5)

Professional Skills:

- Programming: Python, SQL, Java, C/C++, Verilog, JavaScript
- AI/Data Science: PyTorch, PEFT, vLLM, TRL, PyG, LangChain; Hadoop, Spark
- Development: Git; FastAPI; Vue, Streamlit; JMeter
- Computer Architecture/Hardware: FPGA, Vivado; Arduino

Academic Writing Skills: L^AT_EX, Microsoft Visio, OmniGraffle, Figma