

Zhuoyue Wan

Ph.D. Candidate in Computer Science | The Hong Kong Polytechnic University
zhuoy.wan@connect.polyu.hk | wanzhuoyue.com | Hong Kong

Education

The Hong Kong Polytechnic University

Jan. 2025 - Present

Ph.D. in Computer Science

Supervisor: Prof. Chen Jason Zhang

Research collaborator: Prof. Raymond Chi-Wing Wong

The Hong Kong University of Science and Technology

Sep. 2022 - Nov. 2023

M.S. in Data-Driven Modeling

Chongqing University

Sep. 2017 - Jun. 2021

B.S. in Statistics

Research Interests

Natural Language Interfaces to Data: Text-to-SQL, Text-to-Visualization, and Text-to-OverpassQL.

LLM Data Preparation: Pre-training data quality/diversity assessment, denoising, and coreset selection.

Data Agents & Optimization: Mathematical optimization for effective and efficient autonomous data agents.

Publications | Published & Accepted

1. **Zhuoyue Wan**, Jiaqi Fan, Hwanhee Kim, Chen Jason Zhang, Shuaimin Li, Yuanfeng Song, Haoyang Li, Xiao-Yong Wei, Raymond Chi-Wing Wong. *XOver: Execution-Calibrated Exemplar Contextualization for Multilingual Text-to-OverpassQL on OpenStreetMap*. **ICDE 2027. (CCF-A)**
2. **Zhuoyue Wan**, Wentao Hu, Hwanhee Kim, Chen Jason Zhang, Shuaimin Li, Yuanfeng Song, Ming Deng, Xiao-Yong Wei, Raymond Chi-Wing Wong. *TACO: Token-Aware Context Optimization for Structured OpenStreetMap Query Generation*. **SIGMOD 2027. (CCF-A)**
3. **Zhuoyue Wan**, Wentao Hu, Chen Jason Zhang, Yuanfeng Song, Shuaimin Li, Ruiqiang Xiao, Xiao-Yong Wei, Raymond Chi-Wing Wong. *OsmT: Bridging OpenStreetMap Queries and Natural Language with Open-source Tag-aware Language Models*. **ICDE 2026. (CCF-A)**
4. **Zhuoyue Wan**, Yuanfeng Song, Shuaimin Li, Chen Jason Zhang, Raymond Chi-Wing Wong. *DataVisT5: A Pre-trained Language Model for Jointly Understanding Text and Data Visualization*. **ICDE 2025. (CCF-A)**
5. Jiaqi Fan, **Zhuoyue Wan**, Chen Jason Zhang, Xiao-Yong Wei, Haoyang Li, Yuanfeng Song, Wangze Ni, Raymond Chi-Wing Wong. *Text-to-RLS: Towards Constraint-Anchored Row-Level Security in Natural Language Database Interfaces*. **ICDE 2027. (CCF-A)**
6. Wentao Hu, **Zhuoyue Wan**, Jinhao Shen, Chen Jason Zhang, Xiaoyong Wei, Qing Li. *Meta-Moderator: Empowering Multi-Agent Debate with Meta-Cognition*. **Findings of EMNLP 2026.**
7. Shuaimin Li, Liyang Fan, Zeyang Li, **Zhuoyue Wan**, Yufang Lin, Shiwen Ni, Feiteng Fang, Hamid Alinejad-Rokny, Yuanfeng Song, Kun Jing, Chen Jason Zhang, Min Yang. *SrDetection: A Self-Referential Framework for Data Leakage Detection in Code Large Language Models*. **Findings of ACL 2026.**
8. Shuaimin Li, Yuanfeng Song, Xuanang Chen, Anni Peng, **Zhuoyue Wan**, Chen Jason Zhang, Raymond Chi-Wing Wong. *VisPoison: An Effective Backdoor Attack Framework for Tabular Data Visualization Models*. **ICDE 2026. (CCF-A)**
9. Luyang Luo, Xin Huang, Minghao Wang, **Zhuoyue Wan**, Hao Chen. *Medical Image Debiasing by Learning Adaptive Agreement from a Biased Council*. **Medical Image Analysis, 2025. (JCR-Q1)**

Preprints

1. Huahang Li, Wentao Hu, **Zhuoyue Wan**, Chen Jason Zhang, Haoyang Li, Xiaoyong Wei. *DataClaw: An Autonomous Data Agent with Instant Messaging Integration*. **arXiv preprint, 2026.**
2. Yan Luo, **Zhuoyue Wan**, Nemin Wu, Yuzhong Chen, Gengchen Mai, Fu-lai Chung, Kent Larson. *TransFlower: An Explainable Transformer-Based Model with Flow-to-Flow Attention for Commuting Flow Prediction*. **arXiv preprint, 2024.**

Research Experience

Research Assistant

Jan. 2024 - Dec. 2024

The Hong Kong Polytechnic University

Teaching Experience

Teaching Assistant, The Hong Kong Polytechnic University

Fall 2026	COMP4431 - Artificial Intelligence	Dr. Wai Man Pang
Summer 2024-2026	HTM568 - Smart Tourism and Big Data Analytics	Prof. Chen Jason Zhang
Spring 2026	COMP5112 - Data Structures and Database Systems	Prof. Wen Hua
Fall 2025	COMP5311 - Internet Infrastructure and Protocols	Prof. Donghui Dai
Spring 2025	COMP4442 - Service and Cloud Computing	Prof. Zhaorui Zhang

Academic Services

Program Committee Member: WSDM 2027.

Conference Reviewer: WWW 2027.

Journal Reviewer: International Journal of Applied Earth Observation and Geoinformation.

Co-reviewer: ACL, VLDB, ICDE, EMNLP, ACM MM, AAAI.

Honors & Awards

Second Prize, The Chinese Mathematics Competitions	Nov. 2018
Second-class Scholarship, Chongqing University	May 2021
Advanced Individual of Scientific and Technological Academic Innovation, Chongqing University	Dec. 2020
Third Prize, The 8th TipDM Cup Data Mining Challenge Committee	Jun. 2020
Outstanding Student, Chongqing University	Jan. 2020; Jan. 2019
Third-class Scholarship, Chongqing University	Nov. 2018

Skills

Programming: Python, SQL, R, MATLAB, C++. **English:** IELTS 6.5.