

Yanwei Huang

Ph.D. Student, HKUST
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EDUCATION

HKUST, Clear Water Bay, Hong Kong

- Ph.D. in Computer Science and Engineering

Sep 2025 – Now

Zhejiang University, Hangzhou, China

- M.S. in Software Engineering (GPA: 92.36/10)
- B.S. in Computer Science (GPA: 3.91/4)

Sep 2022 – Mar 2025

Sep 2018 – Jun 2022

RESEARCH EXPERIENCE

DataVisards Lab, HKUST

May 2025 – Now

- Supervisor: Prof. Arpit Narechania
 - Projects: WebSeek
 - Focus: Multi-agent systems and human-AI collaboration

Data Interaction Group, Carnegie Mellon University

Jul 2024 – Dec 2024

- Supervisors: Prof. Adam Perer and Prof. Jason I. Hong
 - Projects: WeAudit and Vipera
 - Focus: Sensemaking and auditing of large language models

Interactive Data Group, Zhejiang University

Jun 2021 – Mar 2025

- Supervisors: Prof. Yingcai Wu and Prof. Di Weng
 - Projects: Rigel, NL2Rigel, Table Illustrator, and StructVizor
 - Focus: Designing interfaces for data practitioners, covering activities such as data wrangling and profiling

INTERESTS

Visualization, Multi-Agent Systems, Data Science, Human-AI Collaboration

PUBLICATIONS

FIRST-AUTHOR PAPERS

- [1] **Yanwei Huang** and Arpit Narechania, “Facilitating Proactive and Reactive Guidance for Decision Making on the Web: A Design Probe with WebSeek,” *ACM Conference on Human Factors in Computing Systems (CHI)*, 2026.
- [2] **Yanwei Huang**, Wesley Hanwen Deng, Sijia Xiao, Motahhare Eslami, Jason I. Hong, Arpit Narechania, and Adam Perer, “Vipera: Blending Visual and LLM-Driven Guidance for Systematic Auditing of Text-to-Image Generative AI,” *ACM Conference on Human Factors in Computing Systems (CHI)*, 2026.
- [3] **Yanwei Huang**, Wesley Hanwen Deng, Sijia Xiao, Motahhare Eslami, Jason I. Hong, Arpit Narechania, and Adam Perer, “Vipera: Towards Systematic Auditing of Generative Text-to-Image Models at Scale,” *CHI Late-Breaking Work* 2025.
- [4] **Yanwei Huang**, Yan Miao, Di Weng, Adam Perer, and Yingcai Wu, “StructVizor: Interactive profiling of semi-structured textual data,” *ACM Conference on Human Factors in Computing Systems (CHI)*, 2025.
- [5] **Yanwei Huang**, Yunfan Zhou, Ran Chen, Changhao Pan, Xinhuan Shu, Di Weng, and Yingcai Wu, “Interactive Table Synthesis with Natural Language,” *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 2024.
- [6] **Yanwei Huang**, Yurun Yang, Xinhuan Shu, Ran Chen, Di Weng, and Yingcai Wu, “Table Illustrator: Puzzle-based interactive authoring of plain tables,” *ACM Conference on Human Factors in Computing Systems (CHI)*, 2024.

OTHER PAPERS

- [7] Yunfan Zhou, Qiming Shi, Zhongsu Luo, Xiwen Cai, **Yanwei Huang**, Dae Hyun Kim, Di Weng, and Yingcai Wu, “Cerebra: Aligning Implicit Knowledge in Interactive SQL Authoring,” *ACM Conference on Human Factors in Computing Systems (CHI)*, 2026.
- [8] Zhenning Chen, Hanbei Zhan, **Yanwei Huang**, Xin Wu, Dazhen Deng, Di Weng, and Yingcai Wu, “KEditVis: A Visual Analytics System for Knowledge Editing of Large Language Models,” *PacificVis 2026 (IEEE TVCG Journal Track)*.

- [9] Shuhan Liu, Yangtian Liu, Junxin Li, **Yanwei Huang**, Yue Shangguan, Zikun Deng, Di Weng, and Yingcai Wu, "RidgeBuilder: Interactive Authoring of Expressive Ridgeline Plots," *ACM Conference on Human Factors in Computing Systems (CHI)*, 2025.
- [10] Yunfan Zhou, Xiwen Cai, Qiming Shi, **Yanwei Huang**, Haotian Li, Huamin Qu, Di Weng, Yingcai Wu, "Xavier: Toward Better Coding Assistance in Authoring Tabular Data Wrangling Scripts," *ACM Conference on Human Factors in Computing Systems (CHI)*, 2025.
- [11] Ran Chen, Di Weng, **Yanwei Huang**, Xinhuan Shu, Jiayi Zhou, Guodao Sun, and Yingcai Wu, "Rigel: Transforming Tabular Data by Declarative Mapping," *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, Presented at *IEEE VIS*, 2023.
- [12] Mingyuan Wu, Ling Jiang, Jiahong Xiang, **Yanwei Huang**, Heming Cui, Lingming Zhang, and Yuqun Zhang, "One Fuzzing Strategy to Rule Them All," in *International Conference on Software Engineering (ICSE)*, 2022.

UNDER REVIEW & IN PROGRESS

- [-] Kai Xiong*, **Yanwei Huang***, Rongjunchen Zhang, Kun Chen, and Haipang Wu, "PuzzleClone: An SMT-Powered Framework for Synthesizing Verifiable Data," *Under review for ACL 2026*. *: Equal Contribution

AWARDS & SCHOLARSHIPS

- Nominee for Chu Ko-Chen Scholarship (*The highest honor for ZJU students*) 2024
- National Scholarship 2024
- Outstanding Graduate Award, Zhejiang University 2023-2024
- Yongping Scholarship 2022
- China Collegiate Programming Contest, Bronze Medal 2019

INTERNSHIPS

- Research Internship**, HiThink Research, Hangzhou, China Mar 2025 – Aug 2025
 - Co-lead the PuzzleClone project, a scalable and fully-verifiable data synthesis framework for LLM logical reasoning
- Frontend Engineer Internship**, ByteDance Inc., Shanghai, China Feb 2021 – Jun 2021
 - Collaborate with Lark Suite
 - Participated in developing the frontend and SDK of Lark, a telecommunication software

SERVICES

- **Reviewer:** ACM CHI, IEEE VIS, IEEE PacificVis Journal Track, ChinaVIS, ACM DIS
- **Student Volunteer:** ACM UIST 2024
- **Teaching Assistant:** *Introduction to Python Programming* (2026, >100 students), *C Programming* (2023, >150 students), *Seminars for Mixed-class Students* (2022-2023, >400 students)

SKILLS

- Web development (React, Vue, TypeScript)
- LLM/Agent development (AutoGen, Google ADK, AgentOps)
- Data visualization (D3, Vega, Seaborn)
- AI Development (Pytorch, Tensorflow, Huggingface)
- UI Design (Adobe Illustator, Figma)
- Big Data Analysis (PySpark, Tableau)