Yuxuan Wan

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Personal Statement

In my research on coding agents and during my internship at Tencent AI Lab regarding Deep Research Agents, I have worked extensively with multimodal LLM agents, focusing on multi-agent collaboration, context engineering, scaffolding, and post-training. In my intership at Tencent Game AI Center, I have worked on building intelligent agents for game development. I have also explored the evaluation of LLMs.

Education

The Chinese University of Hong Kong (CUHK) Hong Kong
Ph.D. in Computer Science and Engineering; Supervisor: Prof. Michael R. Lyu *2023 –2027 (Expected)*

- **Research Interest:** I am interested in creating LLM agent systems and coding agents to generate visual content, including user interfaces and (UIs) games.

The Chinese University of Hong Kong (CUHK) Hong Kong
B.Eng. in Artificial Intelligence: Systems and Technologies With Honours, First Class *2019 –2023*

- Major GPA: 3.82/4; Cumulative GPA: 3.76/4

University of California Davis Davis, CA, USA
Visiting Scholar (Advisor: Prof. Shiqian Ma) *May –Jul 2022*

- I was responsible for coding and conducting experiments to develop a model for the Projection Robust Wasserstein distance in optimal transport. Living in the U.S. provided valuable exposure to American culture and lifestyle. Here is the report of the research project: https://yistyu.github.io/files/PRUOT.pdf

Experiences

Tencent Game, Game AI Center Shenzhen, China
Internship (Intelligent Assistant for Game Development; Supervisor: Mr. Jingwen Yang) Jan 2026 - Present

- I contributed to the development of an LLM Agent-driven game development system, focusing on the design and implementation of the agent pipeline, information retrieval, and memory management. In this role, I collaborated closely with game designers, artists, and engineering staff to align on progress, iterate on ideas, and ensure smooth cross-functional execution.

Tencent AI Lab Shenzhen, China
Internship (Deep Research Agent; Supervisor: Dr. Tianqing Fang) May 2025 - Jan 2026

- We leveraged *the asymmetry of verification to propose a paradigm where a deep research agent self-improves by evaluating its generated answers to produce iterative feedback and refinements.* https://arxiv.org/abs/2601.15808.
- I implemented two inference-time optimization modules of the Cognitive-Pro Deep Research Agent (https://arxiv.org/pdf/2508.00414). Specifically, I designed and developed the reflection module and the voting module, which improved the performance of the agent by 6%. I wrote Section 2.2 of the technical report that summarizes these contributions.

Qleap Business Solutions Limited Hong Kong, China
Internship (Computer Vision & Algorithm) Sep 2021 - Nov 2021

– Designed and implemented a camera-based motion analysis algorithm to quantify patient movement in stroke recovery exercises. The algorithm, integrated into an interactive rehabilitation game, transformed visual data into real-time motion metrics such as angular velocity and rotation frequency, enhancing the accuracy and engagement of therapy software.

C.W.Chu College, CUHK Hong Kong
Resident Tutor Aug 2023 - Jan 2025

– I organize student activities (cultural nights, floor gatherings, etc.), handle emergencies, and resolve conflicts. This role has refined my communication skills and my ability to foster a supportive environment for students.

Highlights

- **2.5K GitHub Stars:** Our paper *Screencoder: Advancing Visual-to-Code Generation for Front-End Automation via Modular Multimodal Agents* received 2.5K stars on GitHub (https://github.com/leigest519/ScreenCoder).
- **500+ Google Scholar Citations**: My Google Scholar Citations reached 500+ as of Feb 2026 (https://scholar.google.com/citations?user=gnJLyQcAAAAJ&hl=zh-CN).
- **Game development**: I participated in Global Game Jam Hong Kong 2026 as a programmer, working in a team with a game designer, four artists, and another programmer. Within 40 hours, we built and shipped a playable 3D horror game (https://globalgamejam.org/games/2026/inreality-0).

Selected Publications

Preprint'26 **Y.Wan**, T.Fang, Z.Li, Y.Huo, W.Wang, H.Mi, D.Yu, M.Lyu. **Inference-Time Scaling of Verification: Self-Evolving Deep Research Agents via Test-Time Rubric-Guided Verification.** In Submission. https://arxiv.org/abs/2601.15808

Preprint'26 Y.Jiang*, Y.Zheng*, **Y.Wan***, J.Han, Q.Wang, M.Lyu, X.Yue. **Screencoder: Advancing Visual-to-Code Generation for Front-End Automation via Modular Multimodal Agents**. In Submission. https://arxiv.org/abs/2507.22827

Preprint'26 **Y.Wan**, T.Liang, J.Xu, J.Xiao, Y.Huo, M.R. Lyu. **Automatically Generating Web Applications from Requirements Via Multi-Agent Test-Driven Development.** In Submission. https://arxiv.org/abs/2509.25297

FSE'25 **Y.Wan**, C.Wang, Y.Dong, W.Wang, S.Li, Y.Huo, M.R.Lyu. **Automatically Generating UI Code from Screenshot: A Divide-and-Conquer-Based Approach.** FSE'2025. https://dl.acm.org/doi/abs/10.1145/3729364

EMNLP'24 **Y.Wan**, W.Wang, Y.Yang, Y.Yuan, J.Huang, P.He, W.Jiao, M.R.Lyu. **LogicAsker: Evaluating and Improving the Logical Reasoning Ability of Large Language Models.** EMNLP'2024. https://arxiv.org/abs/2401.00757

FSE'23 **Y.Wan**, W.Wang, P.He, J.Gu, H.Bai, M.R.Lyu. **BiasAsker: Measuring the Bias in Conversational AI System.** ESEC/FSE'2023. https://dl.acm.org/doi/abs/10.1145/3611643.3616310

Scholarships and Awards

Dean's List (Top 10%), 2021, 2022, 2023 — Faculty of Engineering, CUHK
Germaine She Wong Scholarship, 2023 (10,000 HKD) — C.W.Chu College, CUHK
Outstanding Academic Performance, 2022 (10,000 HKD) — Dept. of Computer Science, CUHK
Liu Shai-Tat and Yu Chi-Hing Memorial Scholarship, 2022 (10,000 HKD) — C.W.Chu College, CUHK
Reaching Out Award, 2022 (10,000 HKD) — CUHK
Professor Charles K. Kao Research Exchange Scholarship, 2022 (50,000 HKD) — CUHK
ELITE Stream Scholarship, 2021 (10,000 HKD) — Dept. of Computer Science, CUHK
Samson Leung Scholarship, 2021 (10,000 HKD) — C.W.Chu College, CUHK