

WENXUAN WANG

AI PhD Student · AI Agents · Image Generation Agents
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SUMMARY

Joint Ph.D. student at Harbin Institute of Technology and Shanghai AI Laboratory, working on AI agents.

EDUCATION

Harbin Institute of Technology Aug 2026 – present

Ph.D. Student, Faculty of Computing

Joint training with Shanghai AI Laboratory and HIT-SCIR. Advisors: Yu Cheng and Weinan Zhang.

Harbin Institute of Technology Aug 2022 – June 2026

Bachelor's, Artificial Intelligence, School of Future Technology

EXPERTISE

Research Generative Models, Text-to-Image Agents, Agent Memory, Skill Learning,
Self-Evolving Agents, Agent-Model Co-evolution

Systems Autonomous Agent Control, Multi-Agent Social Media Simulation,
Skill Evolution Pipelines, Agent Benchmarking and Evaluation

RESEARCH & PUBLICATIONS

Internalizing Agent Experience into Diffusion Model Weights via On-Policy Context Distillation

Co-first author (listed first) · Under review, 2026 · [Paper](#) · [Code](#)

- Introduced D-OPCD to distill agent-refined prompts into diffusion model weights, retaining agent benefits when generating directly from the original query.
- Raised the average direct-generation score from **60.52 to 65.09 across four benchmarks**. A second skill-evolution round added **1.83 points** over a skill-free harness on the updated generator.

SubtleMemory: A Benchmark for Fine-Grained Relational Memory Discrimination in Long-Horizon AI Agents

Co-first author (listed first) · Findings of EMNLP 2026 · [Paper](#) · [Code](#)

- Introduced a benchmark testing whether long-horizon agents distinguish complementary, nuanced, and contradictory relations among memories embedded in user-agent histories.
- Built **1,522 evaluation instances over 10 long histories**, with diagnostic protocols separating failures in memory preservation, retrieval, and downstream reasoning.

Agent Planning Benchmark: A Diagnostic Framework for Planning Capabilities in LLM Agents

Co-first author (listed second) · Findings of EMNLP 2026 · [Paper](#) · [Code](#)

- Co-authored a planning-specific diagnostic benchmark with **4,209 multimodal cases across 22 domains and five settings**, separating planning quality from execution outcomes.
- Evaluated **12 multimodal LLMs** on planning and tool-related robustness; validated APB-guided refinement on **200 ToolSandbox and 200 tau-squared-bench tasks**.

SELECTED PROJECTS

Multi-Agent Social Media Simulation Sandbox Sept 2024 – Jan 2025

A multi-agent sandbox for simulating social media interactions and studying agent behavior.

- Contributed to system iteration and performance optimization, improving the efficiency of multi-agent simulations.

Autonomous Social Media Agent System Mar 2025 – May 2025

An autonomous social media agent system for exploring agent autonomy and influence in online interactions.

- Developed the central control module and supported real-world testing and iterative refinement of the system.

INTERNSHIP EXPERIENCE

Shanghai AI Laboratory · Intern Oct 2025 – Oct 2026

- Researched AI agent memory, planning, and experience distillation, resulting in **three co-first-authored papers**: two accepted to Findings of EMNLP 2026 and one manuscript under review.

SELECTED HONORS & AWARDS

Outstanding Graduate, Harbin Institute of Technology May 2026

Song Qingling Grant Mar 2026

Second Prize, ASC Student Supercomputer Challenge May 2025

Samsung Scholarship Mar 2025

Song Qingling Grant Mar 2025

First Prize, National College Student Mathematics Competition (Heilongjiang Division) Nov 2023