Haoran Qian

Wuhan, China | u202513604@hust.edu.cn | github.com/AetherNoah | World Model Notes

EDUCATION

Huazhong University of Science and Technology (HUST) Wuhan, China

B.Eng. in Computer Science and Technology; GPA: 4.6/5.0, Top 5% Sep 2025 – Jun 2029 (Expected)

RESEARCH INTERESTS

Reinforcement learning for generative policies and VLA; action-conditioned video world models; reliable and controllable video generation.

MANUSCRIPT UNDER REVIEW

DreamTamer: From Lucky Samples to Reliable Futures in Action Conditioned World Models

Haoran Qian (Second Author); Advisor: Zhipeng Zhang Submitted to ICLR 2027

RESEARCH EXPERIENCE

DreamTamer | Action-Conditioned World Models Jun 2026 – Present

AutoLab, Shanghai Jiao Tong University | Remote Research Intern Remote

- Designed the reward formulation and algorithmic improvements for reinforcement-learning post-training in DreamTamer; implemented the core training pipeline connecting action-conditioned rollouts, reward computation, and parameter updates.
- On Genie Envisioner, DreamTamer increased overall mean PSNR from 24.23 to 25.65 dB (+1.42 dB), reduced LPIPS from 0.115 to 0.100, and improved SSIM from 0.830 to 0.852.
- Improved worst-of-four overall PSNR from 23.72 to 25.37 dB (+1.65 dB); reduced sampling variance by 69.70% for overall PSNR, 86.67% for LPIPS, and 73.77% for SSIM.

SWE-Bench / SWE-ABS Test Augmentation and Evaluation | **GitHub** Mar 2026 – May 2026

Remote research collaboration; Mentor: Yuling Shi, LLM for Software Engineering Lab Remote

- Debugged test-generation and patch-evaluation pipelines; identified gold-patch overfitting and false rejection of valid public patches. Delivered reproducible experiments, error analyses, and handoff documentation.

SELECTED PROJECTS

World Model Research Notes | GitHub Jul 2026 – Present

Open-source research knowledge base | *Maintainer*

- Built and maintain an open-source knowledge base with 27 paper notes covering model-based RL, generative and embodied world models, and robot policy learning.
- Analyze action conditioning and temporal credit assignment across papers; document EnerVerse-AC code paths and maintain automated indexing and metadata/link validation.

Robot Learning and VLA Experimental Stack Jun 2026 – Jul 2026

LeRobot, OpenPI, ACT, Diffusion Policy, PyTorch, JAX HUST

- Configured and validated LeRobot, OpenPI, ACT, and Diffusion Policy on 4 RTX 5090 GPUs; examined observation-action synchronization, episode management, action-chunk supervision, and policy-rollout interfaces.

SKILLS

Programming and tools: Python, C/C++, Bash, Linux, Git, LaTeX

Frameworks: PyTorch, JAX, Hugging Face Transformers, Datasets, PEFT

Methods: Diffusion, DiT, Flow Matching, LoRA, world models, VLA, reinforcement learning