

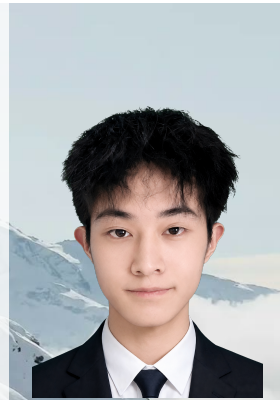
Yongxue Xu (Jerry)

Undergraduate researcher at Sun Yat-sen University

Video generation • World models • 4D scene understanding

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[Google Scholar](#) • [LinkedIn](#)



Profile

Undergraduate researcher at Sun Yat-sen University working on video understanding and generation, multimodal foundation models, world models, and 4D scene understanding. I am interested in systems that connect perception, generation, and interaction, and I am currently seeking industry research internships in these areas.

Education & Toolkit

Sun Yat-sen University

SEP 2023 -- JUN 2027

B.Eng. in Intelligent Science and Technology

GPA 3.91 / 4.0 • Major GPA 3.94 / 4.0

Project 985 / 211 / Double First-Class

RESEARCH

Video understanding/generation, multimodal foundation models, world models, 4D scenes, WAM.

TOOLS & LANGUAGES

Python, C/C++, MATLAB, PyTorch; Chinese (native), English (CET-6).

Research Experience

LMM-Track4D: Eliciting 4D Dynamic Reasoning in LMMs via Trajectory-Grounded Dialogue

Co-first author / NeurIPS 2026

Built a three-domain, multi-view temporal benchmark and a trajectory-grounded framework for object-level 4D reasoning with streaming state tokens and 3D trajectory decoding.

Contribution: Led the technical roadmap, model design, and main experiments; contributed to benchmark construction.

Learning to Reason with Persistent Object States for Video Instance Segmentation

Co-first author / Preprint

Developed POSReasoner, a plug-and-play framework that retains, verifies, and reactivates persistent object states through a sparse graph of states and observations while keeping the host model frozen.

Contribution: Led the roadmap, architecture, implementation, experiments, and manuscript.

Graph Domain Adaptation Does Not End with Representation Learning

Co-first author / Preprint

Developed EviGDA by combining entropy-aligned graph-aware and graph-free experts through post-training fusion, reaching state-of-the-art results on 10 datasets and 16 transfer tasks without learned routing or target pseudo-labels.

Contribution: Designed the core method and led implementation, evaluation, and manuscript development.

Solving the Robust Influence Maximization Problem in Competitive Multilayer Networks via a Diffusion-Aware Role-Guided Evolutionary Approach

First author / TNSE under review

Developed DRCIM-ML, a diffusion-aware role-guided evolutionary framework with cross-layer alignment, role constraints, dynamic robustness evaluation, and multi-task search.

Contribution: Led the roadmap, core experiments, patent filing, and manuscript; one patent pending.

Identifying Critical Nodes with Deep Learning and Reinforcement Learning: A Case Study on Urban Road Networks

Third author / GBCEC Best Paper

Evaluated GNN and DQN approaches for critical-node discovery on real urban road networks.

Contribution: Contributed dataset construction, baseline reproduction, and experimental visualization.

Selected Publications

LMM-Track4D: Eliciting 4D Dynamic Reasoning in LMMs via Trajectory-Grounded Dialogue

2026

Chaoyue Li*, Yongxue Xu*, Jie Feng*, and Jiayu Ding†

Submitted to NeurIPS 2026

Learning to Reason with Persistent Object States for Video Instance Segmentation

2026

Yongxue Xu*, Boxue Yang*, Ziqian Liu, Shaoqiu Zhang, and Linfeng Zhang†

Preprint

Graph Domain Adaptation Does Not End with Representation Learning

2026

Yongxue Xu*, Ziqian Liu*, Enze Zhang, and Maolin Wang†

Preprint

Solving the Robust Influence Maximization Problem in Competitive Multilayer Networks via a Diffusion-Aware Role-Guided Evolutionary Approach

2026

Yongxue Xu, Ziqian Liu, Yongqing Huang, and Shuai Wang†

Under review at IEEE Transactions on Network Science and Engineering

Identifying Critical Nodes with Deep Learning and Reinforcement Learning: A Case Study on Urban Road Networks

2025

Zhonghan Liu, Wenshuo Liu, Yongxue Xu, Ziqian Liu, Yichen Liu, and Shuai Wang†

GBCESC 2025 / Best Paper Award

* Equal contribution. † Corresponding author.

Research Initiatives & Collaborations

I collaborate with researchers at **HKUST**, the **EPIC Lab at SJTU SAI**, and **Westlake University** on video generation, world-action modeling, and multimodal spatiotemporal understanding. I also co-organize **InkMind.AI**, a small group exploring multimodal understanding and generation. Through vibe coding, we develop RSI and auto-research workflows that help AI frame questions, build systems, evaluate results, and iterate with greater precision and efficiency. We see AI-builds-AI as a promising next step.

Video generation, world-action models, multimodal reasoning, and AI-builds-AI.

Awards & Competitions

Sun Yat-sen University First-Class Scholarship

2023–2026

Chinese Mathematics Competition (CMC), Guangdong Region – Second Prize

Dec. 2024

Mathematical Contest in Modeling (MCM), USA – Honorable Mention

Feb. 2025

National Undergraduate Smart Car Competition, South China Region – Second Prize

Aug. 2025

Beyond Research

Table tennis, music, and nature travel.