Academic Slide of Yue Su

I am a third-year undergraduate(2022-2026) at Xidian University, currently pursuing research in robot learning under the guidance of Prof. Lixin Yang and Prof. Cewu Lu at the MVIG Lab, Shanghai Jiao Tong University. Previously, I contributed to research on adversarial attacks against vision models at the Laboratory of Cooperative Intelligent Systems, under the supervision of Prof. Hao Li and Prof. Maoguo Gong.

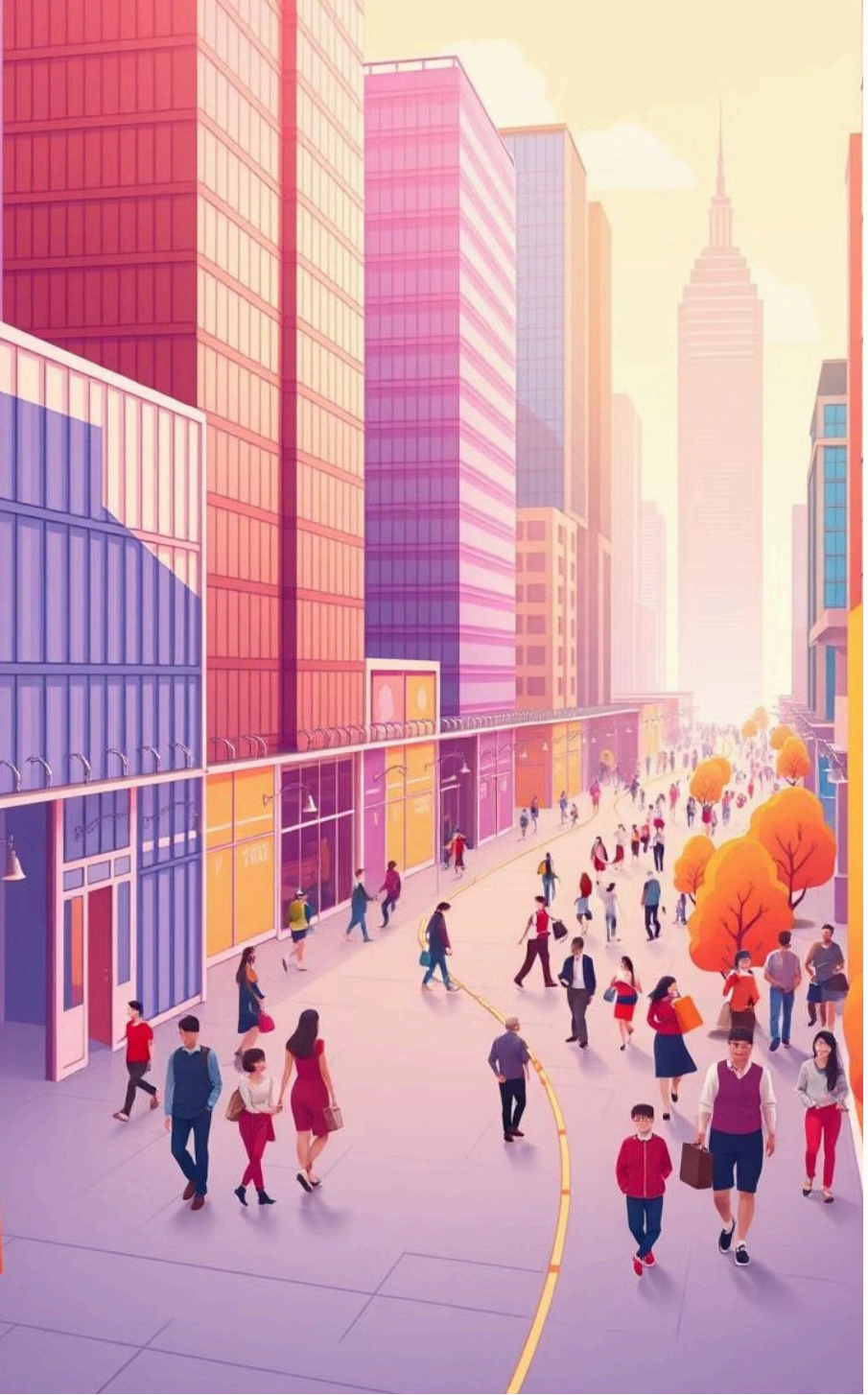
Research Interests

Reasoning-based Learning

Inferring knowledge from interactions with environments to enhance agent's reasoning and generalization, promoting the development of proactive learning.

Generative Modeling

Modeling the agent's knowledge through generative methods to develop into a world model.



Latest Updates

1

AAAI 2025 Acceptance

Our work **Advdisplay** was accepted at AAAI 2025 🔥

2

Robot Learning Research

My first work on robot learning: **MBA**, about object motion for robots manipulation.

3

Microsoft Club Leadership

In charge of **Microsoft Club**. Feel free to reach out if you'd like to join.

4

Blog Launch

I have set up a **Blog Site**, welcome everyone to visit!

Research Experience

Shanghai Jiao Tong University (SJTU)

July 2024 - Now

Research intern at MVIG Lab

Xidian University (XDU)

September 2023 - July 2024

Research intern at OMEGA Lab

Publications - Robot Learning

Motion Before Action: Diffusing Object Motion as Manipulation Condition

Yue Su*, [Xinyu Zhan]*, [Hongjie Fang], [Yong-Lu Li], [Cewu Lu], [Lixin Yang]†

Propose MBA, a novel plug-and-play module leveraging cascaded diffusion processes to generate actions guided by object motion, enabling seamless integration with manipulation policies.

[arxiv] [website] [code]

Publications - Adversarial Attacks

AdvDisplay: Adversarial Display Assembled by Thermoelectric Cooler

Hao Li†, Fanggao Wan, **Yue Su**, Yue Wu, Mingyang Zhang, Maoguo Gong†

Historically, infrared adversarial attacks were single-use and tough to deploy. Using TEC, we implemented efficient attacks adaptable to hardware scenarios. Accepted at AAAI 2025. 🔥

Generative Adversarial Patches for Physical Attacks

Yue Su, Hao Li†, Maoguo Gong†

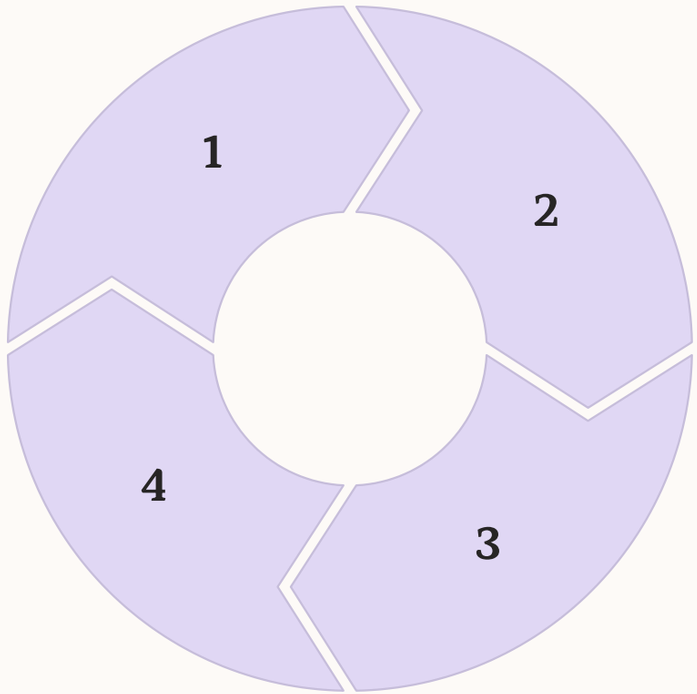
A generative physical adversarial attack on VI-ReID models perturbs modality-invariant features.

[arxiv]

Projects

U-pre

U-Net for time series forecasting



AcoFlow

Heuristic search for maximum flow

AgentCrossTalk

Crosstalk between two LLM agents

FGSM3D

Point cloud gradient perturbation attack

U-pre: U-Net is an excellent learner for time series forecasting due to its architecture and consistent input-output distributions. We combined U-Net with Bert-Encoder to improve performance by incorporating both local and global attention. **[code]** **[report-cn]**

AcoFlow: We challenged the maximum flow problem through ant colony algorithms, designing better heuristic information to find augmenting paths. **[code]** **[report-cn]**

FGSM3D: Extended FGSM to 3D point clouds with success within certain gradient ranges, though 3D model sampling indicated more complexity. **[code]** **[report-cn]**

AgentCrossTalk: Used Google Gemini to create a chatbot application simulating crosstalk performers based on user-provided topics. **[code]** **[website]**

Presentation Images At **Selen-Suyue.github.io**

Awards and Achievements

1 **China Mathematical Contest in Modeling 2023**

First Prize, Provincial Level.
[code]

2 **China Mathematical Contest in Modeling 2024**

First Prize, Provincial Level.
[code], [paper]

3 **China Computer Design Contest 2024**

Second Prize, Northwestern. [code]