# Shaofeng Yin

 github.com/operator22th </> operator22th.github.io +86 13918169235 ysf22@mails.tsinghua.edu.cn

EDUCATION

Tsinghua University | Sept. 2022 – Present
B.S. Information and Computing Science; GPA: 3.946/4.0; Rank: 1/30

PUBLICATIONS & PREPRINTS

[1] **Shaofeng Yin***, Jialong Wu*, Siqiao Huang, Xingjian Su, Xu He, Jianye Hao, and Mingsheng Long. Trajectory World Models for Heterogeneous Environments. In *Proceedings of the 42nd International Conference on Machine Learning (ICML)*, 2025.

[2] Jialong Wu*, **Shaofeng Yin***, Ningya Feng, Xu He, Dong Li, Jianye Hao, and Mingsheng Long[1] iVideoGPT: Interactive VideoGPTs are Scalable World Models. In *Advances in Neural Information Processing Systems*, 2024.

RESEARCH EXPERIENCE

Heterogeneous Environment Modeling | *Advisor: Prof. Mingsheng Long| Tsinghua University* Sept.2024 – Feb.2025
- Try to answer the question: Can we **transfer dynamics knowledge from other morphologies?**
- Pre-train on a total of **1.3 million** trajectories from heterogeneous environments
- Demonstrate favorable **zero-shot generalization** and significant pre-training advantages on **downstream tasks** like Off-Policy evaluation and Model Predictive Control.

Stiffness-Aware Dynamics Modeling | *Advisor: Prof. Guanya Shi| Carnegie Mellon University* July.2024 – Aug.2024
- Aim to improve **physical interaction modeling in high-stiffness regions**, which are critical for **agile control**.
- Achieve **stiffness-awareness** by incorporating a variance threshold into the Model Predictive Control framework.
- Develop an **accurate model in stiff regions** for Go2 control

iVideoGPT | *Advisor: Prof. Mingsheng Long| Tsinghua University* Sept.2023 – June.2024
- Answer the question: How can we leverage the **advancements in scalable video generative models** for developing **interactive visual world models**?
- Achieve **step-level interactivity** via next-token prediction.
- Pre-train on a total of **1.4 million** trajectories.
- Develop **compressive tokenization method** to enable memory savings during training and faster rollouts during generation.

HONORS

Scholarship for Excellence in All Aspects | *University Scholarship* — Oct. 2023, Oct. 2024
Spark Scientific and Technological Innovation Fellowship (top 1% in university) | *Fellowship* — May. 2024
The First Prize of (National) Regional College Students' Physics Contest | *Contest* — Dec. 2023
Scholarship for Excellence in Academic Performance | *University Scholarship* — Oct. 2023

SKILLS

Course: Pursuing major courses in Math and CS with a 4.0/4.0 GPA, including challenging subjects like Measure Theory.

Languages: Proficient in C++, Python, and SystemVerilog. Experienced with PyTorch and JAX.
Tools: Familiar with Git/GitHub, Unix Shell
TOEFL Score: 108 (Speaking 23)

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[1]* indicates equal contribution.