Shaofeng Yin

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

Education

No.2 High School Of East China Normal University Sept. 2019 – July 2022

Tsinghua University Sept. 2022 – Present
B.S. Information and Computing Science; Overall GPA: 3.935/4.0; Major GPA: 4.0/4.0

Publications

[1] 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

iVideoGPT | *Advisor: Prof. Mingsheng Long| Tsinghua University* Sept.2023 – Sept.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** robot manipulation trajectories.
- Develop **compressive tokenization method** to enable memory savings during training and faster rollouts during generation.

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 robot control**.
- Achieve **stiffness-awareness** by incorporating a variance threshold into the MPC framework.
- Develop an **accurate model in stiff regions** for Go2 control.

Unidyna | *Advisor: Prof. Mingsheng Long| Tsinghua University* Sept.2024 – Present

- Try to answer the question: Can we effectively transfer knowledge **across different morphologies** in physical interaction modeling to tackle the out-of-distribution challenges in offline reinforcement learning?
- Pre-train on **data with distinct properties**: Exploratory, Experience replay and Expert Demostration.
- Demonstrates the **dynamics transfer benefits** in some state-based control environments.

Honors

Scholarship for Excellent in All Aspects | *University Scholarship* 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 All Aspects | *University Scholarship* Oct. 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)

[1] * indicates equal contribution.