

Yinjie Zhao

✉ yinjie3@illinois.edu

🌐 [YinjieZhao22](https://YinjieZhao22.github.io)

🌐 [Website](#)

RESEARCH INTERESTS

My research interest involves building efficient and reliable systems for machine learning.

EDUCATION

University of Illinois Urbana-Champaign, Champaign, IL, United States 2026 - present
Ph.D. in Computer Science

University of Michigan, Ann Arbor, MI, United States 2024 - 2026
B.S.E. in Data Science, *Summa Cum Laude*

Shanghai Jiao Tong University - UM-STU Joint Institute, Shanghai, China 2022 - 2026
B.S.E. in Mechanical Engineering

PUBLICATIONS

OpGuard: Bitwise Alignment for Precise and General Debugging of Production LLM Training
Ziming Zhou, **Yinjie Zhao**, Hang Zhu, Wenxiao Wang, Zhihao Bai, Yun Zhang, Shuguang Wang, Haibin Lin, Peng Huang
OSDI 2026 Best Paper Nominee

EXPERIENCE

University of Michigan – Order Lab Ann Arbor, MI, United States
Undergraduate Research Intern – Supervisor: *Prof.* Ryan Huang May 2025 – May 2026

• OpGuard: LLM Training Debugging System

- Designed and implemented a tensor parallel (TP) simulator to emulate single-GPU behavior on multi-GPU setups, mitigating the numerical difference and enabling bitwise comparison across executions with different TP configurations.
- Applied OpGuard to diagnose 10 open-source issues on Github, including DeepSpeed, Megatron-LM, and transformers.

• TrainCheck: Training with Confidence [\[repo\]](#) (OSDI 2025)

- Designed and implemented the runtime checker with a watchdog to monitor the trace file changes.
- Designed a new proxy to achieve `torch.compile` /distributed training compatibility and reduce runtime overhead.
- Revised the invariant relations (infer/checking).

Shanghai Jiao Tong University – Digital Media and Computer Vision Lab Shanghai, China
Undergraduate Research Intern – Supervisor: *Prof.* Ran Yi Feb. 2024 – Mar. 2025

• Video Customization with Subject and Motion Customization

- Designed an alternating strategy to finetune DreamBooth at the video level for subject identity and train a motion LoRA by finetuning only Q, K projection weights within AnimateDiff for motion learning.
- Designed a dynamic scaling of spatial and temporal LoRA to synthesize personalized videos.

SELECTED PROJECTS

Simulated Basic Operating System EECS 482 (Introduction to Operating Systems)

- Built a multicore thread library, a virtual memory pager (COW, eviction), and a concurrent Network File System.

HONORS & AWARDS

- Outstanding Graduate of Shanghai Jiao Tong University June 2026
- Yuliming Scholarship December 2023
- Outstanding Undergraduate Scholarship (B Level), SJTU December 2023

TEACHING

- Teaching Assistant - CS 598 FYY (Machine Learning for Systems), UIUC Fall 2026
- Teaching Assistant - ME2400J (Intro to Dynamics and Vibrations), SJTU Summer 2024

LEADERSHIP & SERVICE

- Minister of the Outer Liaison Department, UM-SJTU Joint Institute Student Union Sep. 2022 – Jul. 2024