Yiping Wang

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(Latest update: August 28, 2025)

Research Interest

1. **Large Language Models (LLMs)**: Reinforcement Learning for LLMs; Efficient inference for LLMs.
2. **AI4Math**: Applying LLMs for open math problems; Theorem proving with LLMs.
3. **Multimodal**: Provable Data Selection for CLIP models; Video Generation.
4. **Math4AI**: Theoretical analysis of training dynamics in transformer.

Education

University of Washington, Seattle Sept. 2023 - Present

Ph.D. student in Paul G. Allen School of Computer Science & Engineering
Adviser: Prof. Simon Shaolei Du

Zhejiang University Sept. 2019 - June 2023

B.Eng. in Computer Science & Technology at College of Computer Science and Technology

- Minor in Mathematics and Applied Mathematics, earned credits: 45.5.
- Rank top 1% in Chu Kochen Honors College.

Professional Experiences

1. **Research Intern @ Microsoft, Weizhu Chen's Group** June 2024 - Present
   Mentor: Yelong Shen and Shuohang Wang
   Project: Self-Evolution LLM; RL for LLM; Video Generation

Key Honors and Awards

Chu Kochen Scholarship (Highest honor scholarship in Zhejiang University) 2022
National Scholarship in Chu Kochen Honor College 2020
1st Prize for Academic Excellence in Chu Kochen Honor College 2020&2021&2022
1st Prize in Zhejiang Division of National Mathematics Competition for College Students 2020

Preprint

* denotes equal contribution or alphabetical ordering.

1. **Reinforcement Learning for Reasoning in Large Language Models with One Training Example** [Arxiv]
   Yiping Wang, Qing Yang, Zhiyuan Zeng, Liliang Ren, Liyuan Liu, Baolin Peng, Hao Cheng, Xuehai He, Kuan Wang, Jianfeng Gao, Weizhu Chen, Shuohang Wang, Simon Shaolei Du, Yelong Shen
   #1 Paper of the day on Huggingface Daily Papers.

2. **Spurious Rewards: Rethinking Training Signals in RLVR** [Arxiv]
   Rulin Shao*, Shuyue Stella Li*, Rui Xin*, Scott Geng*, Yiping Wang, Sewoong Oh, Simon Shaolei Du, Nathan Lambert, Sewon Min, Ranjay Krishna, Yulia Tsvetkov, Hannaneh Hajishirzi, Pang Wei Koh, Luke Zettlemoyer

3. **Mojito: Motion Trajectory and Intensity Control for Video Generation** [Arxiv]
   Xuehai He, Shuohang Wang, Jianwei Yang, Xiaoxia Wu, Yiping Wang, Kuan Wang, Zheng Zhan, Olatunji Ruwase, Yelong Shen, Xin Eric Wang

4. **SHARP: Accelerating Language Model Inference by SHaring Adjacent layers with Recovery Parameters** [Arxiv]
   Yiping Wang, Hanxian Huang, Yifang Chen, Jishen Zhao, Simon S. Du, Yuandong Tian

Publications

(* denotes equal contribution or alphabetical ordering)

1. **Is Your World Simulator a Good Story Presenter? A Consecutive Events-Based Benchmark for Future Long Video Generation** [Arxiv]
   Yiping Wang, Xuehai He, Kuan Wang, Luyao Ma, Jianwei Yang, Shuohang Wang, Simon Shaolei Du, Yelong Shen
   CVPR2025.

2. **FloE: On-the-Fly MoE Inference** [Arxiv]
   Yuxin Zhou, Zheng Li, Jun Zhang, Jue Wang, Yiping Wang, Zhongle Xie, Ke Chen, Lidan Shou
   ICML 2025.

3. **Infer Human's Intentions Before Following Natural Language Instructions** [Arxiv]
   Yanming Wan, Yue Wu, Yiping Wang, Jiayuan Mao, Natasha Jaque
   AAAI 2025.

4. **CLIPLoss and Norm-Based Data Selection Methods for Multimodal Contrastive Learning** [Arxiv]
   Yiping Wang*, Yifang Chen*, Wendan Yan, Alex Fang, Wenjing Zhou, Kevin Jamieson, Simon S. Du
   NeurIPS 2024 (Spotlight)

5. **JoMA: Demystifying Multilayer Transformers via JOint Dynamics of MLP and Attention** [Arxiv]
   Yuandong Tian, Yiping Wang, Zhenyu Zhang, Beidi Chen, Simon S. Du
   ICLR 2024.

6. **Scan and Snap: Understanding Training Dynamics and Token Composition in 1-layer Transformer** [Arxiv]
   Yuandong Tian, Yiping Wang, Beidi Chen, Simon S. Du
   NeurIPS 2023.
   Oral presentation at High-dimensional learning dynamics workshop at ICML 2023

7. **Improved Active Multi-Task Representation Learning via Lasso** [Arxiv]
   Yiping Wang, Yifang Chen, Kevin Jamieson, Simon S. Du
   ICML 2023.

8. **C-Mixup: Improving Generalization in Regression** [Arxiv] [Code]
   Huaxiu Yao*, Yiping Wang*, Linjun Zhang, James Zou, Chelsea Finn
   NeurIPS 2022.

Professional Activities

- Paper Reviewer: NeurIPS(23,24,25), ICLR(24,25), ICML(23,24,25), CVPR(2025), (TF2M,DMLR)@ICML24.
- UW CSE Ph.D. Admission Reviewer: 2024, 2025.
- TA: CSE 446 Machine Learning (25sp), CSE 543 Deep Learning (24Au).