Yiming Shi

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Education

University of Electronic Science and Technology of China September 2021 – Present
Undergraduate in Internet+ Dual Degree Program *Chengdu, China*
Double Major: Computer Science, Finance

Experience

Tsinghua SAIL Group (TSAIL), Tsinghua University July 2024 – Present
Co-advised by Prof. Jun Zhu and Dr. Zehua Chen *Research Intern*
Currently working with Dr. Duo Su in the area of dataset distillation, with a focus on Efficient AI.

Center for Future Media, University of Electronic Science and Technology of China May 2023 – July 2024
Co-advised by Prof. Yang Yang and Prof. Jiwei Wei *Research Intern*
During my studies, I participated in the International Algorithm Case Competition (IACC) for the Guangdong-Hong Kong-Macao Greater Bay Area in the track of Efficient and Reliable Text-to-Image Generation, where I achieved fourth place (4/815) in the finals. Additionally, I submitted a manuscript to IEEE Transactions on Neural Networks and Learning Systems (TNNLS) as the first author and co-authored two other papers, which were submitted to the Association for the Advancement of Artificial Intelligence (AAAI) and IEEE Transactions on Circuits and Systems for Video Technology (TCSVT), respectively. My primary research interests include Parameter-Efficient Fine-Tuning (PEFT) and diffusion models.

Star Studio, UESTC November 2022 – May 2023
Official Campus Forum Workshop *DevOps Team Member*

Research Interests

Efficient AI, Parameter-Efficient-Fine-Tuning (PEFT), Dataset Distillation, Diffusion, Multimodal
I'm deeply passionate about deep learning and its applications in *these fields*.

Competition Achievements

- **Third Prize** and **Ranking: 4/815** in the International Algorithm and Case Competition (IACC),

Publication

LoDD: LoRA-based Dataset Distillation Approach In preparation
Co-Author | September 2024 | CVPR 2025

LoLDU: Low-Rank Adaptation via Lower-Diag-Upper Decomposistion Submitted
First Author | June 2024 | *IEEE Transactions on Neural Networks and Learning Systems*

DiffLoRA: Generating Personalized Low-Rank Adaptation Weights with Diffusion Under Review
Co-Author | August 2024 | *AAAI 2025*

SVFit: Parameter-Efficient Fine-Tuning of Large Pre-Trained Models Using Singular Values Submitted
Co-Author | September 2024 | *IEEE Transactions on Circuits and Systems for Video Technology*

Project Experience

Efficient and Reliable Text-to-Image Generation | Diffusion, LoRA, Docker August 2023 – December 2023
Project Leader *IACC Challenge*

- This track aimed to optimize and improve the portrait generation system based on Unidiffuser. The project included three core modules: data processing, algorithm optimization, and image editing. By constructing a high-quality dataset for model fine-tuning, optimizing inference performance, and providing image editing functionality, we achieved an efficient and practical portrait generation and editing system.
- As the project leader, I was mainly responsible for three aspects:
  - Designing and implementing a data processing pipeline to construct a high-quality portrait-text pair dataset for fine-tuning the Unidiffuser model.
  - Optimizing inference speed using the DDIM algorithm.
  - Developing image editing functionality based on the image2image technique to enable flexible editing of input images.

Our final round code is available here, and the preliminary round code is available here.

Professional Skills

- Familiar with PyTorch, Pytorch Lightning, Hydra, PEFT, Diffusers, Transformers, Shell Script, Matplotlib.
- Skilled in leveraging Parameter-Efficient Fine-Tuning (PEFT) across different models and domains.
- Experienced in Linux development and working as an MLOps.