Yiming Shi

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RESEARCH INTERESTS

Agentic AI, Efficient AI, Parameter-Efficient Fine-Tuning (PEFT), Diffusion, Multimodal

I'm deeply passionate about deep learning and its applications in these fields.

EDUCATION

The University of Queensland

Incoming Ph.D. in Computer Science | QS Top 50 Co-advised by Prof. Zhifeng Bao and Dr. Hai Lan

Starting July 2025 Brisbane, Australia

University of Electronic Science and Technology of China

Undergraduate in Internet+ Dual Degree Program | Project 985 Double Major: Computer Science, Finance

September 2021 – Expected June 2025 Chengdu, China

EXPERIENCE

Center of Machine Learning Research, Peking University

November 2024 - Present Interim Algorithm Leader, co-advised by Prof. Bin Cui and Prof. Wentao Zhang Project Manager Leading the algorithm team at Diffuse Future Ltd. (Prof. Bin Cui's startup) for video model pre-training and data preparation, responsible for managing the Conditioned Consistent Generation project and processing and organizing of 30TB video dataset (7 million videos) for large-scale model pre-training.

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, targeting ICCV 2025.

Center for Future Media, University of Electronic Science and Technology of China May 2023 - July 2024

Co-advised by Prof. Yang Yang and Dr. 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 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) and IEEE Transactions on Multimedia (TMM), respectively. During this period, my research focused on Parameter-Efficient Fine-Tuning (PEFT) and diffusion models.

Star Studio, UESTC

November 2022 – May 2023 DevOps Team Member

Official BBS Maintained the university's BBS platform.

Competition Achievements

- First Prize in the Social Cognition and Decision Competition finals hosted by Chinese Institute of Command and Control (CICC)
- Third Prize and Ranking: 4/815 in the 2th International Algorithm and Case Competition (IACC)

PUBLICATION

LoLDU: Low-Rank Adaptation via Lower-Diag-Upper Decomposistion

Major Revision

First Author | IEEE Transactions on Neural Networks and Learning Systems

♦ Cited by Prof. Andrew Chi-Chih Yao, Turing Award Laureate, Tsinghua IIIS

DiffLoRA: Generating Personalized Low-Rank Adaptation Weights with Diffusion

Under Review

Co-Author | CVPR 2025

SVFit: Parameter-Efficient Fine-Tuning of Large Pre-Trained Models Using Singular Values

Under Review

Co-Author | IEEE Transactions on Multimedia

DAP: Diffusion as a Prior for Datasets Distillation

DAP: Diffusion as a Prior for Datasets Distillation

In preparation

Co-Author | Targeting ICCV 2025

PROJECT EXPERIENCE

Conditioned Consistent Generation | Video Processing & Pre-training *Project Manager*

November 2024 – Present

PKU & Diffuse Future Ltd.

• Leading algorithm team development of large-scale video generation model with conditioned consistent generation

- Managing processing and organization of 30TB video dataset (7M videos) for model pre-training
- · Designing and implementing efficient data processing pipelines with quality control measures
- · Collaborating with Prof. Bin Cui and Prof. Wentao Zhang to align technical direction with research goals

Efficient and Reliable Text-to-Image Generation | Diffusion, LoRA *Project Leader*

August 2023 – December 2023

IACC Challenge

• Led development of optimized portrait generation system based on Unidiffuser, achieving 4th place among 815 teams

- Key contributions as project leader:
 - Designed data processing pipeline for high-quality portrait-text dataset construction
- Optimized inference performance using DDIM algorithm
- Developed image editing functionality using image2image techniques
- Project code available on GitHub for final round and preliminary round

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.