Geng Yu

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RESEARCH INTEREST

My research interests lie in **trustworthy**, **agentic** and **efficient AI**, especially in efficient training and inference of foundation models, including large language models and diffusion language models.

EDUCATION

Shanghai Jiao Tong University, China

Sep 2023 – Mar 2026 (expected) **GPA: 3.01/4.0**

M.Eng. in Information and Communication Engineering

Advisor: Jiangchao Yao

Sep 2019 – Jun 2023

Shanghai Jiao Tong University, China B.Enq. in Electrical and Electronics Engineering

GPA: 3.89/4.3

PUBLICATIONS

(* indicates the equal contribution.)

Wide-In, Narrow-Out: Revokable Decoding for Efficient and Effective DLLMs [paper] [arXiv 2025]

Feng Hong*, $\mathbf{Geng}\ \mathbf{Yu*},$ Yushi Ye, Haicheng Huang, Huangjie Zheng, Ya
 Zhang, Yanfeng Wang

Self-Calibrated Tuning of Vision-Language Models for Out-of-Distribution Detection [paper] [NeurIPS 2024]

Geng Yu, Jianing Zhu, Jiangchao Yao, Bo Han

Sandbox: safeguarded multi-label learning through safe optimal transport [paper] [Machine Learning Journal 2024] Lefei Zhang*, Geng Yu*, Jiangchao Yao, Yew-soon Ong, Ivor W. Tsang, James T. Kwok

Diversified Outlier Exposure for Out-of-Distribution Detection via Informative Extrapolation [paper] [NeurIPS 2023] Jianing Zhu, Geng Yu, Jiangchao Yao, Tongliang Liu, Gang Niu, Masashi Sugiyama, Bo Han

RESEARCH EXPERIENCE

Diversified Outlier Exposure for Out-of-Distribution Detection Advisor: Jiangchao Yao, Bo Han

Shanghai Jiao Tong University Feb 2023 – Sep 2023

• This work proposes a new outlier exposure framework that diversifies the surrogate OOD distribution based on the limited auxiliary outliers to achieve better out-of-distribution detection. It has been accepted in NeurIPS 2023.

Multi-label Learning With Label Noise Via Optimal Transport Advisor: Jiangchao Yao

Shanghai Jiao Tong University Sep 2023 – Sep 2024

• This work proposes a label-noise learning method that iteratively refines the noisy labels under the framework of optimal transport. It has been accepted in Machine Learning Journal 2024.

Prompt-Tuning Vision-Language Models for Out-of-Distribution Detection
Advisor: Jiangchao Yao

Shanghai Jiao Tong University
Feb 2024 – Sep 2024

• This work proposes a prompt-tuning framework for vision-language models that mitigates the problem of inaccurate surrogate OOD features to achieve better OOD detection. It has been accepted in NeurIPS 2024.

Online Data Selection for Acceleration of Language Model Pretraining

RIKEN AIP

Advisor: Gang Niu, Masashi Sugiyama

Oct 2024 - Sep 2025

This work proposes a sequence-length-based online data selection method to accelerate language model pretraining.
 It is currently under review.

Continual Pretraining on Science Domain with MoE Upcycling

Shanghai Jiao Tong University

Advisor: Linfeng Zhang

Apr 2025 - Jul 2025

• This work presents a Mixture-of-Experts language model, based on Qwen2.5-7B and continually pretrained on data in science domain, with different experts for knowledge in different disciplines. It has been released on arXiv.

Revokable Decoding for Efficient Diffusion Large Language Model

Shanghai Jiao Tong University May 2025 – Jul 2025

Advisor: Jiangchao Yao

• This work proposes a training-free algorithm that enables revokable decoding in diffusion large language models to improve the speed-quality tradeoff. It has been released on arXiv.

SKILLS

Programming: Python, PyTorch, C++, MATLAB, LaTeX

Languages: Chinese (native), English (TOEFL 109: R30 L28 S23 W28).

HONORS AND AWARDS

• Shanghai Jiao Tong University Merit Scholarship	2020 - 2025
• Shanghai Jiao Tong University Outstanding Undergraduate	2023
Shanghai Jiao Tong University Merit Student	2021