Yu Li

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Education

George Washington University — **Washington, D.C.**
Ph.D. in Electrical and Computer Engineering, GPA: 4.0/4.0 — *Aug 2025 – Present*
Advisor: Prof. Tian Lan

Wuhan University, Hongyi Honor College — **Wuhan, China**
B.Eng. in Microelectronics Science and Technology, GPA: 3.87/4.0 — *Sept 2021 – Jun 2025*
Advisor: Prof. Cheng Lei

Research Interests

My research focuses on **LLM post-training** and **agent policy learning**, with specific interests in: (i) parameter-efficient fine-tuning (LoRA), (ii) preference alignment and reasoning for LLMs, (iii) agent reasoning, planning, and policy optimization.

Preprints & Under Review

[1] Right Meets Wrong: Bilateral Context Conditioning with Reward-Confidence Correction for GRPO
Yu Li, Tian Lan, Zhengling Qi
Under review by International Conference on Machine Learning (ICML), 2026

[2] INSPO: Unlocking Intrinsic Self-Reflection for LLM Preference Optimization
Yu Li, Tian Lan, Zhengling Qi
Under review by International Conference on Machine Learning (ICML), 2026

[3] Reason in Chains, Learn in Trees: Self-Rectification and Grafting for Multi-turn Agent Policy Optimization
Yu Li, Sizhe Tang, Tian Lan
Under review by Annual Meeting of the Association for Computational Linguistics (ACL), 2026

[4] MultiRefine-V: Multi-Turn Reinforcement Learning for Enhancing Verilog Code Synthesis
Qiufeng Li, **Yu Li**, Shu Hong, Tian Lan, Weidong Cao
Under review by Design Automation Conference (DAC), 2026

[5] CRAFT-LoRA: Content-Style Personalization via Rank-Constrained Adaptation and Training-Free Fusion
Yu Li, Yujun Cai, Chi Zhang
Under review by IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2026. Review: 5/4/2

[6] Prada: Black-Box LLM Adaptation with Private Data on Devices
Ziyao Wang, Yexiao He, Zheyu Shen, **Yu Li**, Guoheng Sun, Myungjin Lee, Ang Li
arXiv preprint, 2025

Publications

†=Equal Contribution

[1] Calibrating and Rotating: A Unified Framework for Weight Conditioning in PEFT
Da Chang, Peng Xue, **Yu Li**, Yongxiang Liu, Pengxiang Xu, Shixun Zhang
The 40th Annual AAAI Conference on Artificial Intelligence (AAAI), 2026

[2] KG-SAM: Injecting Anatomical Knowledge into Segment Anything Models via Conditional Random Fields
Yu Li, Da Chang, Xi Xiao
IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2026

[3] DLoRA-TrOCR: Mixed Text Mode Optical Character Recognition Based On Transformer
Yu Li†, Da Chang†
International Conference on Neural Information Processing (ICONIP), 2024

[4] ECG Classification with Dual Models: XGBoost Voting and Deep Learning with Attention
Yu Li, Yunhao Hu, Jie Chen, Binghao Wang, Wei Liu *et al.*
International Conference on Advanced Computer Technology and Electronics, 2023

[5] Dual branch SAM-Transformer Fusion Network for Accurate Breast Ultrasound Image Segmentation
Yu Li, Jin Huang, Du Wang, Liye Mei, Cheng Lei *et al.*
Medical Physics, 2025

[6] SfMDiffusion: Self-supervised Monocular Depth Estimation in Endoscopy Based on Diffusion Models
Yu Li, Da Chang, Jin Huang, Du Wang, Liye Mei, Cheng Lei *et al.*
International Journal of Computer Assisted Radiology and Surgery, 2025

[7] Local Optimum Time-Reassigned Synchrosqueezing Transform for Bearing Fault Diagnosis
Site Lv, Shan Zeng, **Yu Li**, Ke Yang, Yulong Chen
IEEE Sensors Journal, 2024

Selected Awards & Honors

- **Innova International Exchange Scholarship**, 6 recipients university-wide, ¥70,000. *2024*
- **Innova Excellence Scholarship**, Top 3%, ¥10,000, twice. *2023, 2024*
- **First-Class Scholarship**, Top 5%, ¥3,000, three times. *2022, 2023, 2024*

Academic Services

- **Conference Reviewer:** ICML'26, CVPR'26, AAAI'26, ICASSP'26
- **Journal Reviewer:** Neurocomputing, Frontiers in Oncology, IEEE Transactions on Networking

Skills

- **Languages:** English (TOEFL 105), Chinese (Native), Japanese (Basic)
- **ML/LLM Stack:** PyTorch, DeepSpeed, Flash Attention, vLLM, OpenRLHF, VERL, TRL
- **Tools & Platforms:** Linux/Ubuntu, Docker, Git, Weights & Biases, Cadence