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 & Prof. Zhengling Qi

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.

Publications

C=Conference, J=Journal, P=Preprint, †=Equal Contribution

[C.1] Calibrating and Rotating: A Unified Framework for Weight Conditioning in PEFT
D. Chang, P. Xue, **Y. Li** *et al.*
The 40th Annual AAAI Conference on Artificial Intelligence (AAAI), 2026

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

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

[C.4] ECG Classification with Dual Models: XGBoost Voting and Deep Learning with Attention
Y. Li, Y. Hu, J. Chen, B. Wang, W. Liu *et al.*
International Conference on Advanced Computer Technology and Electronics, 2023

[J.1] Dual branch SAM-Transformer Fusion Network for Accurate Breast Ultrasound Image Segmentation
Y. Li, J. Huang, D. Wang, L. Mei, C. Lei *et al.*
Medical Physics, 2025

[J.2] SfMDiffusion: Self-supervised Monocular Depth Estimation in Endoscopy Based on Diffusion Models
Y. Li, D. Chang, J. Huang, D. Wang, L. Mei, C. Lei *et al.*
International Journal of Computer Assisted Radiology and Surgery, 2025

[J.3] Local Optimum Time-Reassigned Synchrosqueezing Transform for Bearing Fault Diagnosis
S. Lv, S. Zeng, **Y. Li** *et al.*
IEEE Sensors Journal, 2024

[P.1] When Right Meets Wrong: Bilateral Context Conditioning with Reward-Confidence Correction for GRPO
Y. Li, T. Lan, Z. Qi
Under review by International Conference on Machine Learning (ICML), 2026

[P.2] Reason in Chains, Learn in Trees: Self-Rectification and Grafting for Multi-turn Agent Policy Optimization
Y. Li, S. Tang, T. Lan
Under review by Annual Meeting of the Association for Computational Linguistics (ACL), 2026

[P.3] INSPO: Unlocking Intrinsic Self-Reflection for LLM Preference Optimization
Y. Li, T. Lan, Z. Qi
Under review by International Conference on Machine Learning (ICML), 2026

[P.4] MultiRefine-V: Multi-Turn Reinforcement Learning for Enhancing Verilog Code Synthesis
Q. Li, **Y. Li**, S. Hong, T. Lan, W. Cao
Under review by Design Automation Conference (DAC), 2026

[P.5] CRAFT-LoRA: Content-Style Personalization via Rank-Constrained Adaptation and Training-Free Fusion

Y. Li, Y. Cai, C. Zhang
Under review by IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2026. Review: 5/4/2

[**P.6**] **Prada: Black-Box LLM Adaptation with Private Data on Devices**
Z. Wang, Y. He, Z. Shen, **Y. Li**, G. Sun, M. Lee, A. Li
arXiv preprint, 2025

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

Skills

- **Languages:** English (TOEFL 110), Chinese (Native), Japanese (Basic)
- **ML/LLM Stack:** PyTorch, DeepSpeed, Flash Attention, vLLM, OpenRLHF, VERL, TRL
- **Tools & Platforms:** Linux/Ubuntu, Docker, Git, Weights & Biases, Cadence