

吕兴泰

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LLM 后训练 | LLM 架构设计 | Agent



教育背景

清华大学 电子系 (直博)

2024.09 - 至今

清华大学 电子系 (本科)

2020.09 - 2024.06

- 专业排名 1/251, 绩点 3.98/4

研究成果

- 已在 ACL、ICLR、ICML 等机器学习领域顶尖会议上发表论文 10 余篇, 其中一作或共同一作论文 3 篇录用, 2 篇在投, Google Scholar 引用 1000+
- [1] **Xingtai Lv***, Yuxin Zuo*, Youbang Sun, Hongyi Liu, Yuntian Wei, Zhekai Chen, Xuekai Zhu, Kaiyan Zhang, Bingning Wang, Ning Ding, Bowen Zhou. **Towards a unified view of large language model post-training.**
- [2] **Xingtai Lv**, Ning Ding, Kaiyan Zhang, Ermo Hua, Ganqu Cui, Bowen Zhou. **Scalable Efficient Training of Large Language Models with Low-dimensional Projected Attention.** EMNLP 2024
- [3] Ning Ding*, **Xingtai Lv***, Qiaosen Wang, Yulin Chen, Bowen Zhou, Zhiyuan Liu, Maosong Sun. **Sparse Low-rank Adaptation of Pre-trained Language Models.** EMNLP 2023
- [4] **Xingtai Lv***, Ning Ding*, Yujia Qin, Zhiyuan Liu, Maosong Sun. **Parameter-efficient weight ensembling facilitates task-level knowledge transfer.** ACL 2023
- [5] **Xingtai Lv***, Youbang Sun*, Kaiyan Zhang*, Shang Qu, Xuekai Zhu, Yuchen Fan, Yi Wu, Ermo Hua, Xinwei Long, Ning Ding, Bowen Zhou. **Technologies on effectiveness and efficiency: A survey of state spaces models.**
- [6] Kaiyan Zhang*, Yuxin Zuo*, Bingxiang He*, Youbang Sun*, Runze Liu*, Che Jiang*, Yuchen Fan*, Kai Tian*, Guoli Jia*, Pengfei Li*, Yu Fu*, **Xingtai Lv***(Core Contributor), Yuchen Zhang*, Sihang Zeng*, Shang Qu*, Haozhan Li*, Shijie Wang*, Yuru Wang*, Xinwei Long, Fangfu Liu, Xiang Xu, Jiaze Ma, Xuekai Zhu, Ermo Hua, Yihao Liu, Zonglin Li, Huayu Chen, Xiaoye Qu, Yafu Li, Weize Chen, Zhenzhao Yuan, Junqi Gao, Dong Li, Zhiyuan Ma, Ganqu Cui, Zhiyuan Liu, Biqing Qi, Ning Ding, Bowen Zhou. **A survey of reinforcement learning for large reasoning models.**
- [7] Ganqu Cui, Lifan Yuan, Zefan Wang, Hanbin Wang, Yuchen Zhang, Jiacheng Chen, Wendi Li, Bingxiang He, Yuchen Fan, Tianyu Yu, Qixin Xu, Weize Chen, Jiarui Yuan, Huayu Chen, Kaiyan Zhang, **Xingtai Lv**, Shuo Wang, Yuan Yao, Xu Han, Hao Peng, Yu Cheng, Zhiyuan Liu, Maosong Sun, Bowen Zhou, Ning Ding. **Process reinforcement through implicit rewards.**

实习/科研经历

微信, 腾讯

2025.08 - 2026.04

Topic: LLM 后训练

- Towards a unified view of large language model post-training, GitHub Star 200+
 - 从 loss gradient 角度统一 LLM 各种后训练算法框架, 提出基于 Performance Feedback 的融合算法
- Post-Trained MoE Can Skip Half Experts via Self-Distillation
 - 把经过全流程训练的 MoE 模型迁移为动态 MoE, 减少超过一半的 MoE 计算量, 不损失模型性能

Topic 1: LLM 后训练

- A survey of reinforcement learning for large reasoning models, Citation 120+
 - RL survey, 重点梳理了使用 RL 训练 LLM 时的基本方案和重点问题

Topic 2: LLM 模型架构设计

- Scalable Efficient Training of Large Language Models with Low-dimensional Projected Attention, EMNLP 2024
 - 将 Attention 参数替换为低秩参数, 获得效率更高且效果更好的 Transformer
- Technologies on effectiveness and efficiency: A survey of state spaces models
 - SSM survey, 重点梳理了从 S4 到 Mamba2 的核心技术和数学原理
- Fourier Position Embedding: Enhancing Attention's Periodic Extension for Length Generalization, ICML 2025
 - 改进 RoPE, 提出对频谱损坏更加鲁棒的位置编码算法 FoPE

Topic 3: Agent

- Marti: A framework for multi-agent llm systems reinforced training and inference, ICLR 2026
 - 多 Agent 系统训练推理框架 infra 设计

Topic 1: LLM 后训练

- Process reinforcement through implicit rewards, TMLR, Citation 350+
 - 隐式奖励的 RL 算法设计与旗舰模型训练 PRIME

Topic 2: LLM 高效参数微调

- Sparse Low-rank Adaptation of Pre-trained Language Models, EMNLP 2023, Citation 180+
 - 动态高效参数微调算法 SparseLoRA
- Parameter-efficient weight ensembling facilitates task-level knowledge transfer, ACL 2023
 - 高效参数模块的任务迁移研究

所获荣誉及奖学金

北京市优秀毕业生	2024 年
清华大学优秀毕业生 (全系 4 人)	2024 年
清华大学优秀毕业论文	2024 年
国家奖学金	2023 年
清华大学综合优秀奖学金	2023 年