WANPENG ZHANG

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Intro

I am a Ph.D. candidate in the School of Computer Science at Peking University, advised by Professor Zongqing Lu.
My research interests include: *Reinforcement Learning, Language Modeling, and Embodied Agent.*

Education

Peking University	**Sep. 2022 – Present**
Ph.D. Candidate, School of Computer Science	*Beijing, China*
Tsinghua University	**Sep. 2019 – Jun. 2022**
Master of Science Degree, Department of Computer Science and Technology	*Beijing, China*
Nankai University	**Sep. 2015 – Jun. 2019**
Bachelor of Science Degree, School of Mathematical Sciences	*Tianjin, China*

Experience

BeingBeyond	**Apr.2025 – Present**
Research Intern (Embodied AI)	*Beijing, China*
Beijing Academy of Artificial Intelligence	**May. 2024 – Mar.2025**
Research Intern (Multimodal LLMs / Embodied Agent)	*Beijing, China*
Tencent AI Lab	**Jun. 2020 – Jul. 2021**
Research Intern (Reinforcement Learning / AI for Science)	*Shenzhen, China*

Publication

1. **Wanpeng Zhang**, Zilong Xie, Yicheng Feng, Yijiang Li, Xingrun Xing, Sipeng Zheng, Zongqing Lu. *From Pixels to Tokens: Byte-Pair Encoding on Quantized Visual Modalities.* (**ICLR 2025**)

2. Xingrun Xing, Boyan Gao, David A. Clifton, Zheng Liu, Shitao Xiao, **Wanpeng Zhang**, Li Du, Zheng Zhang, Guoqi Li, Jiajun Zhang. *SpikeLLM: Scaling up Spiking Neural Network to Large Language Models via Saliency-based Spiking.* (**ICLR 2025**)

3. Xiaopeng Yu, **Wanpeng Zhang**, Zongqing Lu. *LLM-Based Explicit Models of Opponents for Multi-Agent Games.* (**NAACL 2025**)

4. **Wanpeng Zhang**, Yilin Li, Boyu Yang, Zongqing Lu. *Tackling Non-Stationarity in Reinforcement Learning via Causal-Origin Representation.* (**ICML 2024**)

5. **Wanpeng Zhang**, Zongqing Lu. *AdaRefiner: Refining Decisions of Language Models with Adaptive Feedback.* (**NAACL 2024**, *findings*)

6. Ziluo Ding*, **Wanpeng Zhang***, Junpeng Yue, Xiangjun Wang, Tiejun Huang, Zongqing Lu. *Entity Divider with Language Grounding in Multi-Agent Reinforcement Learning.* (**ICML 2023**)

7. Xiaopeng Yu, Jiechuan Jiang, **Wanpeng Zhang**, Haobin Jiang, Zongqing Lu. *Model-Based Opponent Modeling.* (**NeurIPS 2022**)

8. Xiaoyan Cao, Yao Yao, Lanqing Li, **Wanpeng Zhang**, Zhicheng An, Zhong Zhang, Li Xiao, Shihui Guo, Xiaoyu Cao, Meihong Wu, Dijun Luo. *iGrow: A Smart Agriculture Solution to Autonomous Greenhouse Control.* (**AAAI 2022**)

9. Mingzhe Chen, Xi Xiao, **Wanpeng Zhang**, Xiaotian Gao. *Efficient and Stable Information Directed Exploration for Continuous Reinforcement Learning.* (**ICASSP 2022**)

10. **Wanpeng Zhang**, Xiaoyan Cao, Yao Yao, Zhicheng An, Dijun Luo, Xi Xiao. *Robust Model-based Reinforcement Learning for Autonomous Greenhouse Control.* (**ACML 2021**)

11. Yao Yao, Li Xiao, Zhicheng An, **Wanpeng Zhang**, Dijun Luo. *Sample Efficient Reinforcement Learning via Model-Ensemble Exploration and Exploitation.* (**ICRA 2021**)

12. Zhicheng An, Xiaoyan Cao, Yao Yao, **Wanpeng Zhang**, Lanqing Li, Yue Wang, Shihui Guo, Dijun Luo. *A Simulator-based Planning Framework for Optimizing Autonomous Greenhouse Control Strategy.* (**ICAPS 2021**)

13. Bowen Zhao, Xi Xiao, **Wanpeng Zhang**, Bin Zhang, Guojun Gan, Shutao Xia. *Self-Paced Probabilistic Principal Component Analysis for Data with Outliers.* (**ICASSP 2020**)

Preprint

1. Xingrun Xing, Zheng Liu, Shitao Xiao, Boyan Gao, Yiming Liang, **Wanpeng Zhang**, Haokun Lin, Guoqi Li, Jiajun Zhang. *EfficientLLM: Scalable Pruning-Aware Pretraining for Architecture-Agnostic Edge Language Models.* (arXiv'25.02)

2. Yicheng Feng, Yijiang Li, **Wanpeng Zhang**, Hao Luo, Zihao Yue, Sipeng Zheng, Zongqing Lu. *VideoOrion: Tokenizing Object Dynamics in Videos.* (arXiv'24.11)

3. **Wanpeng Zhang**, Xi Xiao, Yao Yao, Mingzhe Chen, Dijun Luo. *MBDP: A Model-based Approach to Achieve both Robustness and Sample Efficiency via Double Dropout Planning.* (arXiv'21.08)

Patent

- Zongqing Lu, **Wanpeng Zhang**. *Multimodal data processing method, device, storage medium, and electronic equipment.* (CN119226992A)

- **Wanpeng Zhang**, Dijun Luo, Xi Xiao. *Method, device and equipment for determining parameters and storage medium.* (CN112527104A)

Award

- Award for Scientific Research of Peking University. (Dec. 2024)

- Presidential Scholarship of Peking University. (Nov. 2024)

- Rhino-bird Elite Training Program of Tencent AI Lab. (Jul. 2021)

- Mathematical Contest in Modeling (MCM/ICM), Meritorious Winner (First Prize). (Apr. 2017)

- China Undergraduate Mathematical Contest in Modeling (CUMCM), Second Prize. (Jan. 2016)

Service

Conference Reviewer

- ICML / NeurIPS / ICLR / ICCV / AAAI / ICRA / AISTATS

Journal Reviewer

- TNNLS / TIST

Teaching Assistant

- Deep Reinforcement Learning, Peking University. *Spring, 2025.*