Yijun (Steven) Yang

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Education

University of Technology Sydney

Ph.D. Student in Computer Science

Australian Artificial Intelligence Institute, Prof. Chengqi Zhang

Southern University of Science and Technology

Research Assistant in Computer Science

Beijing University of Aeronautics and Astronautics

Bachelor in Automatic Control

Jan 2020 - Jul 2024

Jul 2017 - Oct 2019

Sep 2013 - Jun 2017

Publications

• Embodied Multi-modal Agent Trained by an LLM from a Parallel Textworld

Yijun Yang, Tianyi Zhou, Kanxue Li, Dapeng Tao, Lusong Li, Li Shen, Xiaodong He, Jing Jiang, Yuhui Shi 2024, IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Webpage

• MuEP: A Multimodal Benchmark for Embodied Planning with Foundation Models

Kanxue Li, Baosheng Yu, Qi Zheng, Yibing Zhan, Yuhui Zhang, Tianle Zhang, Yijun Yang, Yue Chen, Lei Sun, Qiong Cao, Li Shen, Lusong Li, Dapeng Tao, Xiaodong He 2024, International Joint Conference on Artificial Intelligence (IJCAI)
Webpage

• Continual Task Allocation in Meta-Policy Network via Sparse Prompting

Yijun Yang, Tianyi Zhou, Jing Jiang, Guodong Long, Yuhui Shi 2023, International Conference on Machine Learning (ICML) Webpage

• Pareto Policy Pool for Model-based Offline Reinforcement Learning

Yijun Yang, Jing Jiang, Tianyi Zhou, Jie Ma, Yuhui Shi 2022, International Conference on Learning Representations (ICLR) Webpage

• PyPop7: A Pure-Python Library for Population-Based Black-Box Optimization

Qiqi Duan, Guochen Zhou, Chang Shao, Zhuowei Wang, Mingyang Feng, Yijun Yang, Qi Zhao, Yuhui Shi 2022, arXiv preprint arXiv:2212.05652 (submitted to JMLR Machine Learning Open Source Software) Webpage

• Collective Learning of Low-Memory Matrix Adaptation for Large-Scale Black-Box Optimization Qiqi Duan, Guochen Zhou, Chang Shao, Yijun Yang, Yuhui Shi

2022, International Conference on Parallel Problem Solving from Nature (PPSN) Webpage

• Distributed Evolution Strategies for Large-Scale Optimization

Qiqi Duan, Guochen Zhou, Chang Shao, Yijun Yang, Yuhui Shi 2022, Proceedings of the Genetic and Evolutionary Computation Conference Companion (GECCO) Webpage

· BiES: Adaptive Policy Optimization for Model-Based Offline Reinforcement Learning

Yijun Yang, Jing Jiang, Zhuowei Wang, Qiqi Duan, Yuhui Shi 2022, Australasian Joint Conference on Artificial Intelligence (AJCAI) Webpage

Critical Developments and Applications of Swarm Intelligence

Yijun Yang, Yuhui Shi 2018, Book Webpage

 Active Disturbance Rejection Control for Small Unmanned Helicopters via Lévy-flight-based Pigeon-Inspired Optimization

Daifeng Zhang, Haibin Duan, Yijun Yang 2017, Aircraft Engineering and Aerospace Technology (Journal) Webpage

 Pendulum-like Oscillation Controller for UAV based on Lévy-flight Pigeon-Inspired Optimization and LOR

Zhuqing Liu, Haibin Duan, Yijun Yang, Xiaoguang Hu 2016, IEEE Symposium Series on Computational Intelligence (SSCI) Webpage

Industry Experience

Project of Tencent's Foundation Models

Feb 2024 - Jul 2024

Research Intern @ Video Generation Team

- Developed VQ-GAN models and the whole training pipeline for efficient visual tokenizers
- Built a real-time method for synthesizing audio-driven portrait videos from a single image

JD Explore Academy

Jun 2023 - Dec 2023

Research Intern @ Robot Learning Team

• Developed Embodied Multi-Modal Agents for navigation and manipulation tasks

Awards

2022 AAII Student Best Paper Award in the category of AI theory and algorithms

Services

Technical Paper Reviewer for:

- Annual Conference on Neural Information Processing Systems (NeurIPS)
- International Conference on Learning Representations (ICLR)
- International Conference on Machine Learning (ICML)
- IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR)
- European Conference on Computer Vision (ECCV)
- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)