Zhenhao Zhang 章震豪

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Education

ShanghaiTech University,Master Student in Computer Science 2024.9 - now

MoE Key Laboratory, VDI Center, YesAI Lab. Advisor: Prof. Ye Shi and Prof. Jingya Wang
GPA: 3.85/4 (Specialized Course) Embodied AI: 4.0 (A+) Convex Optimization: 4.0 (A+) Deep learning: 3.7 (A-) Robotics: 3.7 (A-)

China University of Petroleum,B.E. Degree in Computer Science 2020.9 - 2024.6

Intern in the Department of Data Science and Statistics. Advisor by Prof. Yunquan Song
GPA: 3.3/5 C/C++ Program: 100 Matlab: 99 DIP: 95 Python Program: 95 Math Model: 95 Computer Vision: 90 Linear Algebra: 90

Publications

Research Interest: Large Language Model, Generative AI, Embodied AI
*Equal Contribution †Corresponding author

OpenHOI: Open-World Hand-Object Interaction Synthesis with Multimodal Large Language Model[paper][page]

- **Zhenhao Zhang**, Ye Shi†, Lingxiao Yang, Suting Ni, Qi Ye, Jingya Wang†
- ShanghaiTech University, Zhejiang University
- Introduce the first Open-World Hand-Object Interaction (HOI) Synthesis framework that can generate Long-horizon HOI sequences of Unseen Objects from Open-vocabulary instructions with a 3D Multimodal Large Language Model.

DAG: Unleash the potential of Diffusion Model for Open-Vocabulary 3D Affordance Grounding[page]

- Hanqing Wang*†, **Zhenhao Zhang***, Kaiyang Ji*, Mingyu Liu, Wenti Yin, Yuchao Chen, Zhirui Liu, Hangxing Zhang
- Shanghai AI Lab, ShanghaiTech University, Zhejiang University, Huazhong University of Science and Technology
- A novel framework designed to unlock affordance knowledge within diffusion models for 3D affordance grounding.

Diffusion-based Reinforcement Learning via Q-weighted Variational Policy Optimization[NeurIPS2024][page]

- Shutong Ding, Ke Hu, **Zhenhao Zhang**, Kan Ren, Weinan Zhang, Jingyi Yu, Jingya Wang, Ye Shi†
- ShanghaiTech University, Shanghai Jiao Tong University
- We propose a novel diffusion-based online RL algorithm, conducting policy optimization with Q-weighted variational loss and diffusion entropy regularization to exploit the expressiveness and exploration capability of diffusion policy.

Robust Variable Selection for High-dimensional Regression with Missing Data and Measurement Errors[paper]

- **Zhenhao Zhang**, Yunquan Song†
- China University of Petroleum
- We use inverse probability weighting and additivity error models to address missing data and measurement errors.
- I finished this work in 2023 when I was an undergraduate student intern in the Department of Data Science and Statistics.

Honors and Awards

ShanghaiTech University, Academic Scholarship	2024.9
China University of Petroleum, Academic Scholarship	2023.9
China University of Petroleum, Outstanding Scholarship(Competition)	2023.9
China Robotics and Artificial Intelligence Competition, National Second Prize	2023.7
LanQiao Cup, Shandong First Prize in Group A	2023.4
Kaggle Featured Code Competition, Bronze(SOLO)	2022.11
China University of Petroleum, Outstanding Scholarship(Competition)	2022.9
America Mathematics Contest in Modeling, Finalist, Top-1%	2022.6
LanQiao Cup, Shandong First Prize in Group A	2021.4

InternShips

SignalPlus, AI Agent System Development Intern 2025.6-2025.9

- Project: LLMs for Quantitative Trading
- Responsible for designing and developing a macroeconomic AI agent that monitors economic market events in real time and provides prompt data to downstream agents
- Establish a Macro Knowledge Base to enhance the performance of AI agents through RAG

ShanghaiTech University, Visiting Student 2024.3-2024.9

- VDI Center, YesAI Lab. Advisor: Prof. Ye Shi
- Research Area: Embodied AI, Reinforcement Learning
- Paper:NeurIPS2024[paper]

HAOMO AI, Predictive Algorithm Intern(Auto Driving) 2023.10-2023.12

- Project: Hybrid Auto-driving based on rules and networks

China University of Petroleum, Research Intern 2021.7-2023.9

- Department of Data Science and Statistics. Advisor: Prof. Yunquan Song
- Research Area: Machine Learning, Biomedical Information
- Paper:ARXIV2023[paper]

Services

- PC Member: NeurIPS 2024, ICLR 2025, AISTATS 2025, ICML 2025, NeurIPS 2025, IJCNN 2025
- Association Member: CAA Member, CCF Student Member