YIXIAN ZHANG

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EDUCATION

Tsinghua University *August 2024 - now*
School of Information Scicnce and Technology Overall GPA: 3.96/4
Southeast University *September 2020 - June 2024*
Information and Computing Science Overall GPA: 3.8/4
Coursework: Reinforcement Learning, Robotics, AI Agent, Optimization

PUBLICATIONS

Game Agent 2022 - 2023
IEEE Transactions on Games (first author, accepted)

· **Title:** Deep reinforcement learning using optimized Monte Carlo tree search in EWN
· Develop a game agent for chess game using the optimized deep reinforcement learning techniques

Sample Efficient Reinforcement Learning 2024
ICLR (first author, accepted)

· **Title:** Residual Kernel Policy Network: Enhancing Stability and Robustness in RKHS-Based Reinforcement Learning
· Improving the sample efficiency in reinforcement learning with RKHS, while residual layer and representation learning are utilized to enhance stability and robustness issues caused by RKHS method.

Large Multi-Agent Systems 2023-2025
IEEE Transactions on Power Systems (first author, minor revision)

· **Title:** High-Dimensional Probability Preserving Scenario Reduction Method Using Adaptive Selection with Sampling for Large-Scale Power System
· Develop an optimization framework for large-scale power systems to preserve the probability characteristics within high-dimensional distributions.

Other Publications

· Li, Z., Wei, Y., **Zhang, Y**., Zhao, X., Cao, J., & Guo, J. (2024). Adaptive data processing framework for efficient short-term traffic flow prediction. Nonlinear Dynamics, 112(17), 15231-15249.
· **Zhang, Y.**, Tang, H., Wei, C., Ding, W. (2025). Bidirectional Soft Actor-Critic: Leveraging Forward and Reverse KL Divergence for Efficient Reinforcement Learning, arxiv.
· **Zhang, Y.**, Tang, H., Wang, C., Ding, W. (2025). Policy Newton Algorithm in Reproducing Kernel Hilbert Space, arxiv.
· Wei, C., Tang, H., **Zhang, Y.**, Wang, C., Ding, W. (2025). Distributional Decision Transformer: Risk-Sensitive Offline RL via Quantile-Based Critics and Stochastic Return, IROS, under review.

AWARDS, HONORS

Outstanding graduates in Southeast University (5%), **Undergraduate Excellent Graduation Project in Southeast University** (5%)

The first prize in China Undergraduate Mathematical Contest in Modeling (0.55%)