

Jianfei Ma



RESEARCH INTERESTS

SWIRL: Sample Efficiency, World Models and Intrinsic Motivation for Reinforcement Learning

EDUCATION

National University of Singapore

Singapore

Doctor of Philosophy in Computer Science

Aug. 2024 – Present

Advisor: Prof. Wee Sun Lee

Northwestern Polytechnical University

Xi'an, Shaanxi

Bachelor of Science in Statistics

Aug. 2019 – Jul. 2023

PUBLICATION

- Ma, J. [Discerning Temporal Difference Learning](#). (AAAI, 2024)
- Ma, J. [Generative Intrinsic Optimization: Intrinsic Control with Model Learning](#). (NeurIPS Workshop IMOL, 2023)
- Ma, J. [The Point to Which Soft Actor-Critic Converges](#). (ICLR Tiny Papers, 2023)

PREPRINT

- Ma, J. [Distillation Policy Optimization](#). (arXiv, 2023)
- Ma, J. [Entropy Augmented Reinforcement Learning](#). (arXiv, 2022)

EXPERIENCE

Distributional Model-Based RL via Variational Inference

Jun. 2023 – May 2024

Research Assistant with [Huazhe Xu](#)

Tsinghua University

- Developed a distributional control method through probabilistic inference
- Unified joint evaluation & control with a world model

Average-Reward Least Squares Temporal Difference Methods

Sep. 2022 – Dec. 2022

Research Assistant with [Shangdong Zhang](#)

University of Virginia

- Extended average-reward off-policy LSTD(λ) based on MSPBE objectives
- Conducted convergence analysis of the algorithm

PROJECTS

MagiOPT

Jun. 2022 – Jul. 2022

- A Unified Pytorch Optimizer for Numerical Optimization

AWARDS

ASC Student Supercomputer Challenge

Jan. 2022 – Mar. 2022

- Second Class Prize

Mathematical Contest In Modeling

Feb. 2021

- Honorable Mention

SKILLS

Programming Language: Python, C/C++, Bash, R, Matlab, Elisp

Framework & Tools: Git, LaTeX, Emacs, Pytorch, Tensorflow, JAX, Flax