Linji (Joey) Wang

Reinforcement Learning Researcher

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Objective

Reinforcement learning researcher specializing in curriculum learning, sample efficiency, and real-world applications of RL in robotics and autonomous systems.

Education

Ph.D. in Computer Science

George Mason University , Fairfax, VA 2023 - Present
GPA: 4.0/4.0

- Research Area: Reinforcement Learning for Robotics
- Advisor: [Professor Name]
- Focus: Curriculum Learning for Efficient Robot Training

M.Sc. in Mechanical Engineering

Carnegie Mellon University , Pittsburgh, PA 2021 - 2023
GPA: 3.8/4.0

- Concentration: Machine Learning and Computer Vision
- Thesis: Vision-based 3D Scene Understanding for AR Applications

B.Sc. in Mechanical Engineering

University of Cincinnati , Cincinnati, OH 2017 - 2021
GPA: 3.9/4.0

- Summa Cum Laude, Dean's List All Semesters
- Exchange Program: Chongqing University, China

Selected Publications

1. **L. Wang**, J. Smith, A. Johnson (2024). *Adaptive Curriculum Learning for Robotic Manipulation Tasks* . IEEE International Conference on Robotics and Automation (ICRA).
2. **L. Wang**, M. Chen (2023). *Real-time 3D Scene Understanding for Augmented Reality Applications* . International Conference on Computer Vision (ICCV) Workshop.
3. **L. Wang** (2022). *Neural Style Transfer: A Comprehensive Study of GAN Architectures* . CMU Machine Learning Department Technical Report.

Experience

Graduate Research Assistant

George Mason University - AI Robotics Lab , Fairfax, VA Aug 2023 - Present

- Developing novel curriculum learning algorithms for robotic manipulation tasks
- Implementing sim-to-real transfer techniques using domain randomization
- Leading research on adaptive difficulty adjustment in RL environments

Teaching Assistant

Carnegie Mellon University , Pittsburgh, PA Jan 2022 - May 2023

- Machine Learning (10-701): Assisted 80+ graduate students, developed PyTorch tutorials
- Deep Learning (11-785): Created assignment materials, conducted office hours
- Received outstanding TA award for exceptional student feedback (4.8/5.0)

Research Assistant

Computational Engineering Robotics Laboratory (CERLab) , Pittsburgh, PA May 2021 - Dec 2022

- Developed real-time computer vision pipeline for 3D object detection and tracking
- Implemented AR visualization system for robotic manipulation guidance
- Published 2 conference papers on visual perception for robotics

Key Projects

Curriculum Learning for Robotic Manipulation (2023 - Present)
Developing adaptive curriculum generation methods for training robotic policies
Technologies: PyTorch, IsaacGym, ROS2

Vision-based 3D Scene Understanding (2021 - 2023)
Real-time 3D reconstruction and semantic segmentation for AR applications
Technologies: OpenCV, PCL, CUDA, Unity

GAN-based Image Style Transfer (2022)
Implemented and optimized various GAN architectures for artistic style transfer
Technologies: PyTorch, Jupyter, Docker

Technical Skills

Primary : Reinforcement Learning, Curriculum Learning, Multi-Agent Systems, Deep RL

Algorithms : Policy Gradient (PPO, SAC), Value-Based (DQN, Rainbow), Model-Based (MBPO, Dreamer), Meta-Learning

Frameworks : PyTorch, Stable Baselines3, RLlib, IsaacGym

Theory : MDP/POMDP, Optimization, Game Theory, Probability Theory

Programming Languages : Python, C++, MATLAB, JavaScript, Julia, Bash

ML/AI Frameworks : PyTorch, TensorFlow, JAX, scikit-learn, OpenAI Gym, Stable Baselines3

Computer Vision : OpenCV, PCL, Open3D, COLMAP, MediaPipe

Robotics : ROS/ROS2, Gazebo, MoveIt, IsaacGym, PyBullet

Tools Platforms : Git/GitHub, Docker, AWS/GCP, LaTeX, Linux, SLURM

Awards & Honors

- **Graduate Research Fellowship** , George Mason University (2023)
- **Outstanding Teaching Assistant Award** , Carnegie Mellon University (2023)
- **Dean's List** , University of Cincinnati (2017-2021)