

# Linji (Joey) Wang

Robotics Research Engineer

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## Objective

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Passionate robotics engineer focused on developing intelligent autonomous systems through the integration of AI, computer vision, and control theory.

## Education

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### 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

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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

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### 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

## 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

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**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

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**Primary** : Robotic Manipulation, Motion Planning, Computer Vision, Control Systems

**Software** : ROS/ROS2, Gazebo, MoveIt, SLAM

**Programming** : Python, C++, MATLAB, CUDA

**Hardware** : Sensor Integration, Embedded Systems, Real-time Systems, Hardware-in-the-loop

**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

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