Ethan M. Clark

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GitHub | LinkedIn | Website

Summary

Machine Learning Engineer specializing in reinforcement learning and imitation learning, with direct experience on humanoids and unmanned ground vehicles. Passionate about developing general-purpose robotic systems that provide value across industries. Focused on loco-manipulation and tool use capabilities, with particular interest in novel methods for generating high-quality training data.

Industry Experience

Lucky Robots Remote

Founding Engineer/Research Engineer – Embodied AI Mar. 2025 – Present

- Led design and development of learning-based loco-manipulation behaviors for Unitree G1 humanoid robot
- Architected real-time control API enabling seamless code execution across simulator and physical hardware
- Developed sim2real transfer pipeline for pick-and-place using domain randomization

Institute for Human and Machine Cognition (IHMC) Pensacola, FL, USA

Machine Learning Engineer Intern Sept. 2024 – Dec. 2024

- Implemented imitation learning pipeline for 23-DOF humanoid locomotion using markerless motion capture, validating in Isaac Sim with domain randomization

Crow Industries Inc. Scottsdale, AZ, USA

Machine Learning Engineer Intern June 2024 – Sept. 2024

- Engineered PPO-based RL solution for autonomous navigation, achieving 90% success rate in real-world obstacle avoidance across diverse mining terrains using ROS 2-based perception pipeline with real-time sensor fusion of LiDAR and camera data

Academic Experience

Cooperative Robotic Systems Lab Tempe, AZ, USA

Graduate Research for Dr. Yu Zhang, Arizona State University Aug. 2022 – Apr. 2025

- Formalized Commutative RL as a novel sequential decision-making framework for environments with action-order invariance, enabling more efficient multi-agent coordination

Nebraska Intelligent Mobile Unmanned Systems Lab Lincoln, NE, USA

Undergraduate Research for Dr. Hoang-Dung Tran, University of Nebraska-Lincoln May 2021 – Aug. 2021

- Developed real-time emergency braking and lane-keeping systems for F1Tenth autonomous racing, integrating LiDAR/camera fusion with reinforcement learning and computer vision algorithms to achieve sub-100ms response time in high-speed autonomous operations

Skills

AI/ML:	Reinforcement Learning, Imitation Learning, PyTorch
Robotics:	Mujoco, Isaac Sim, ROS2, RViz, Gazebo, CARLA, Motion Capture
Languages:	Python, C++, Rust
MLOps:	Weights & Biases, Docker, AWS, CI/CD

Education

Arizona State University Tempe, AZ, USA

M.S. degree in Computer Science Aug. 2022 – May 2025

Magna Cum Laude GPA 3.76

Arizona State University Tempe, AZ, USA

B.S. degree in Computer Science Aug. 2018 - May 2022

Magna Cum Laude GPA 3.67