

Evan T. Pasko

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Education

Massachusetts Institute of Technology (MIT)

Bachelor of Science in Aerospace Engineering with a minor in Computer Science

Relevant Coursework:

Under-actuated Robotics; Space Systems Engineering; Robotics, Autonomy and Decision Making; Real-time Systems

Work Experience

The Aerospace Corporation

El Segundo, CA

Senior Member of the Technical Staff

January 2024-Present

- Conceive of and lead projects for robotics and autonomy applications targeting RL mission managers for spacecraft, real-time collision detection of lab robotic hardware, and closed loop control of multi-robot systems.
- Develop ROS-based application of novel ML kinematics solver with integrated watchdog for real-time hardware applications on over-actuated robotics platforms and guide ML development for optimal system behavior.
- Design and facilitate development of multi-satellite proximity operation mission's ROS software architecture.
- Define new lab software standards, best practices, and introductory material for the robotics lab.

Member of the Technical Staff

September 2022-January 2024

- Served as an integral developer and technical leader in the robotics lab using a multi-robot-arm testbed to emulate orbital motion of satellites for ground testing of flight-like hardware and software.
- Administered the Linux and network architecture for the lab – maintaining and updating the infrastructure for seamless development and integration of novel hardware and software while keeping IT/FIPS compliancy.
- Trained, deployed, and qualified Artificial Intelligence, Machine Learning, and Reinforcement Learning agents for autonomous control in digital twin environments, and successfully deployed them to hardware in the lab.
- Enabled inter-lab communication for distributed HIL/SIL, leveraging ROS and open source astrodynamics software to demonstrate the capability of an attitude control board's RWA commands effecting robot motion.

Associate Member of the Technical Staff

August 2021-September 2022

- Facilitated collaboration between 3D printing and robotics work by designing and manufacturing custom components for use in sensor integration, robotics experiments, and hardware demonstrations.
- Designed and developed complete ROS software stack for fiducial-based rendezvous of robotic arms.

Virtual Robotics Intern

May 2020-January 2021

- Designed, trained, and tested Reinforcement Learning models in AWS SageMaker and RoboMaker to provide a proof of concept for autonomous rendezvous between satellites in orbit with a 2D projection of CW motion.
- Lead an intern concept development and convergence study on chasing and sampling interstellar objects.

MIT: Robotics, Science, and Systems (6.141/16.405)

Cambridge, MA

Autonomous Racecar Project

February-May, 2020

- Developed all of the necessary robotics and autonomy software required for a racecar fitted with Lidar and 2D camera to navigate a race track autonomously – the final race was virtualized for the pandemic.
- Worked in a team to write SLAM, pure pursuit, path-planning, object avoidance, and safety algorithms.

UCSD: Scripps Institute of Oceanography

San Diego, CA

Machine Learning Intern

May-August, 2019

- Developed a neural network to predict the speed of an under-actuated, water surface vehicle (Liquid Robotics Wave Glider) given environmental parameters for use in autonomous path-planning.

Leadership and Awards

The Aerospace Corporation VSD Individual Achievement Award (2023)

El Segundo, CA

For outstanding personal leadership, unique contributions using AI, and technical contributions to the robotics lab

The Aerospace Corporation SPOT Awards (2024, 2023)

El Segundo, CA

Recognition of lab system/network administration; technical leadership for applied RL of autonomous drone control

MIT Leadership Opportunities and Recognition

Cambridge, MA

Undergrad. TA, Men's Varsity Volleyball Captain, All-Academic Team, Fraternity Vice President, '6.141: Best Report'

Relevant Skills and Interests:

Python, ROS/ROS2, Rust, C++, URDF/Xacro, robotic arms, rovers, drones, Linux/network administration, Docker, K8s, ML/AI/RL, SolidWorks, 3D prototyping, project management, Spanish, volleyball, surfing, skiing, visual art.