

Max Merlin

PhD Candidate at Brown University
mtmerlin13@gmail.com | maxmerlin

BIO

As a PhD candidate in computer science coming from robotics engineering, my research focuses on the application of task planning, abstraction, and reinforcement learning. My research involves solving real-world robotics tasks through the effective use of abstractions. I have a passion for teamwork and thrive in environments that foster open discussion and collaboration.

EDUCATION

BROWN UNIVERSITY

PHD CANDIDATE

Aug 2020 - Present | Providence, RI

MS IN COMPUTER SCIENCE

May 2023 | Providence, RI

WPI

Worcester Polytechnic Institute

MS IN ROBOTICS ENGINEERING

May 2018 | Worcester, MA

BS IN ROBOTICS ENGINEERING

May 2016 | Worcester, MA

SKILLS

Python • Java • Solidworks • Matlab
ROS • Git • Linux • \LaTeX • SLAM •
PDDL

- Computer Vision (Object Detection, Segmentation, Optical Flow) •
- Reinforcement Learning •
- Solidworks Certified Associate in Mechanical Design
- Choreorobotics

ROBOTS

Boston Dynamics Spot • Universal Robots • PR2 • Baxter • Turtlebot • Frankenhands

PUBLICATIONS

Information Seeking Macro Actions

IN PREPARATION

Max Merlin, George Konidaris, David Paulius

Effective Task Planning with Missing Objects using Learning-Informed Object Search

IN PREPARATION

Raihan Arnob, Max Merlin, Abhishek Paudel, Benned Heedegard, George Konidaris, Gregory J Stein

Least Commitment Planning for the Object Scouting Problem

IROS 2025

Max Merlin, Ziyi Yang, George Konidaris, David Paulius

Robot Task Planning Under Local Observability

ICRA 2024

Max Merlin, Shane Parr, Neev Parikh, Sergio Orozco, Vedant Gupta, Eric Rosen, George Konidaris

Synthesizing Navigation Abstractions for Planning with Portable Manipulation Skills

CORL 2023

Eric Rosen, Steve James, Sergio Orozco, Vedant Gupta, Max Merlin, Stefanie Tellex, George Konidaris

Locally Observable Markov Decision Processes

ICRA 2020 WORKSHOP ON PERCEPTION, ACTION, LEARNING

Max Merlin, Shane Parr, Neev Parikh, Sergio Orozco, Vedant Gupta, Eric Rosen, George Konidaris

Symbolic Representation of Parameterized Actions for High-Level Task Planning 2020

Heramb Nemlekar*, Max Merlin*, Zhaoyuan Ma, Zhi Li

*Equal Contribution

WORK EXPERIENCES

Robotics and AI (RAI) Institute | RESEARCH SCIENTIST INTERNSHIP

Sept 2023 - May 2024 | Cambridge, MA

As part of the "Watch Understand Do" team led by Jenny Barry, developed tools to extract abstract representations of object interactions from human demonstration video clips.

Brown University | RESEARCH ASSISTANT

Feb 2019 - Aug 2020 | Providence, RI

Prior to becoming a PhD student, developed my research focus exploring connections between reinforcement learning and classical planning and how to integrate other robotics subfields, working with Prof George Konidaris.

Saint-Gobain | ROBOTICS ENGINEERING INTERN

June - Sept 2017 | Northboro, MA

Worked on developing automation of processes for business units and experimenting with new robotic technologies.