

Carlo Bosio

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WHO I AM

AI and Robotics researcher – Optimization, Machine Learning, Sensor Fusion, Reinforcement Learning, LLMs.

EDUCATION

UC Berkeley

Ph.D. in Robotics

Advisor: Mark W. Mueller

Expected May 2027

University of Pisa - Stanford University

M.S. in Robotics, 110/110 (ranked 1st/248)

Advisor: Mark Cutkosky (Stanford)

2022

AI AND ROBOTICS EXPERIENCE

Graduate Student Researcher - UC Berkeley

Berkeley AI Research Lab

- Built Python and Pytorch stack for Large Language Model deployment on local workstation (using Docker) – project on LLM-guided automatic algorithm search for robotics.
- Developed in Python and Pytorch deep reinforcement learning and behavioral cloning algorithms for UAV motion planning and control.
- Real-time time series prediction, filtering and estimation using C/C++.
- Learning-based multi-sensor fusion in C/C++ for robot navigation.
- Daily research and work activities on Unix-based systems.
- Mentored ~ 10 undergraduate and masters students.
- Code version control in Git for collaborating within interdisciplinary research team.

Machine Learning Intern - Zoox Inc.

Prediction and Behavior ML Division

- Worked on estimating agent relevance in driving for compute prioritization using imitation and reinforcement learning.
- Built a distributed reinforcement learning framework using JAX (Python), Ray, PipeDream.
- Enabled same state -of-the-art autonomous driving performances while consuming an order of magnitude fewer agents.
- Collaborated within a team of engineers and computer scientists.
- Filed a patent on my method, submitted work to top ML conference.

PUBLICATIONS

My research was published on *Science Robotics*, various *IEEE RAL*, *IROS*, *Frontiers in Robotics and AI*.

For a full list of publications, please check my [Google Scholar](#) page.

SELECTED HONORS AND AWARDS

KTH Robotics, Perception, and Learning Summer School 2024: full scholarship (3% acceptance rate).

Powley Fund Research Grant (UC Berkeley): Awarded a 30k research grant.

Best Paper Award: IEEE International Conference on Soft Robotics 2022.

EPFL Excellence in Engineering 2021: E3 Summer Research Fellowship (2.3% acceptance rate).

PERSONAL

Spoken Languages: Italian (native), English (fluent), French (fluent), Chinese (basic)

Interests: Entrepreneurship, Politics, Finance, Competitive long distance running, Windsurfing, Scuba Diving