

Yuxiang Yang

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Education

University of Washington

Sep.2020 — Aug.2024

Ph.D candidate in Computer Science, *Advisor*: Prof. Byron Boots

Research Area: Robotics, Reinforcement Learning, Legged Locomotion

University of California, Berkeley

Aug.2014—May.2018

Bachelor of Science, Electric Engineering and Computer Science (with minor in Mathematics)

GPA: 4.00 / 4.00

EECS Major Citation: presented annually in recognition of outstanding undergraduate achievement

Experience

Research

Research Scientist, Google Deepmind

Sep.2024 — present

Research area: Robotics, Machine Learning, Embodied Intelligence

Graduate Student Researcher, Robot Learning Lab

Sep.2020 — Aug.2024

Research area: Robot locomotion and Control, Hierarchical Reinforcement Learning, Robot Perception

- Designed hierarchical learning-control pipeline for efficient learning of agile locomotion.
- Developed python interface and simulation environment for Unitree's quadrupedal robots.

Research Intern, Robotics at Google

Feb.2022 — Sep.2022

Research Area: Robot Locomotion, Offroad Navigation

- Designed pipeline for long-range offroad navigation of quadrupedal robots with RTK-GPS.
- Integrated semantics understanding for robust and high-efficiency offroad operation.

AI Resident Researcher, Robotics at Google

Jul.2018 — Aug.2020

Research area: Meta Reinforcement Learning, Legged Locomotion, Robotics.

- Developed meta reinforcement learning for fast adaptation to different terrains.
- Built model-based pipeline, with which a legged robot learned to walk using 5 minutes of data.

Undergraduate Researcher, Biomimetics Millisystems Lab

Jan.2017 — May.2018

Research on the OpenRoACH hexaped robot platform.

- Constructed ROS control pipeline for the robot.
- Achieved numerous tasks such as treadmill walking and path-following.

Professional

Workshop Organizer

May.2024

ICRA 2024 Workshop on Agile Robotics: from Perception to Dynamic Action

Workshop Organizer

Dec.2022

CoRL 2022 Workshop on Agile Robotics

Reviewer

ICRA (2022 - 2024), IROS (2021 - 2023), CoRL (2021 - 2023), R-AL

Live Robot Demo

CoRL 2021, CoRL 2023, NeurIPS 2023 Workshop on Robot Learning

*Teaching***Teaching Assistant**

Machine Learning

University of Washington

Fall 2021

Teaching AssistantDiscrete Math and Probability Theory
AlgorithmsUC Berkeley
Fall 2016, Spring 2017, Fall 2017
Spring 2018**Honors & Awards****Best Systems Paper Award Finalist, CoRL 2021**

Nov.2021

UC Berkeley EECS Major Citation

May.2018

UC Berkeley EECS Honor's Student

Jun.2017—May.2018

Publications**LocoMan: Advancing Versatile Quadrupedal Dexterity with Lightweight Loco-Manipulators**Changyi Lin, Xingyu Liu, *Yuxiang Yang*, Yaru Niu, Wenhao Yu, Tingnan Zhang, Jie Tan, Byron Boots, Ding Zhao

International Conference on Intelligent Robots and Systems (IROS) 2024

CAJun: Continuous Adaptive Jumping using a Learned Centroidal Controller*Yuxiang Yang*, Guanya Shi, Xiangyun Meng, Wenhao Yu, Tingnan Zhang, Jie Tan, Byron Boots

Conference on Robot Learning (CoRL) 2023

Continuous Versatile Jumping using Learned Action Residuals*Yuxiang Yang*, Xiangyun Meng, Wenhao Yu, Tingnan Zhang, Jie Tan, Byron Boots

Learning for Dynamics and Control (L4DC) 2023

Learning Semantics-Aware Locomotion Skills from Human Demonstrations*Yuxiang Yang*, Xiangyun Meng, Wenhao Yu, Tingnan Zhang, Jie Tan, Byron Boots

Conference on Robot Learning (CoRL) 2022

Fast and Efficient Locomotion via Learned Gait Transitions*Yuxiang Yang*, Tingnan Zhang, Erwin Coumans, Jie Tan, Byron Boots

Conference on Robot Learning (CoRL) 2021

Best System Paper Award finalist**Rapidly Adaptable Legged Robots via Evolutionary Meta-Learning**Xingyou Song*, *Yuxiang Yang**, Krzysztof Choromanski, Ken Caluwaerts, Wenbo Gao, Chelsea Finn, Jie Tan

International Conference on Intelligent Robots and Systems (IROS) 2020

ES-MAML: Simple Hessian-Free Meta LearningXingyou Song, Wenbo Gao, *Yuxiang Yang*, Krzysztof Choromanski, Aldo Pacchiano, Yunhao Tang

International Conference on Learning Representations (ICLR) 2020

Data Efficient Reinforcement Learning for Legged Robots

Yuxiang Yang, Ken Caluwaerts, Atil Iscen, Tingnan Zhang, Jie Tan, Vikas Sindhwani
Conference on Robot Learning (CoRL) 2019

Provably Robust Blackbox Optimization for Reinforcement Learning

Krzysztof Choromanski, Aldo Pacchiano, Jack Parker-Holder, Yunhao Tang, Deepali Jain, *Yuxiang Yang*,
Atil Iscen, Jasmine Hsu, Vikas Sindhwani
Conference on Robot Learning (CoRL) 2019

NoRML: No-Reward Meta Learning

Yuxiang Yang, Ken Caluwaerts, Atil Iscen, Jie Tan, Chelsea Finn
International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS) 2019

OpenRoACH: A Durable Open-Source Hexapedal Platform with Onboard Robot Operating System (ROS)

Liyu Wang, *Yuxiang Yang*, Gustavo Correa, Konstantinos Karydis, Ronald S Fearing
International Conference on Robotics and Automation (ICRA) 2019

Skills Profile

Machine Learning and related

Meta-learning, Reinforcement Learning, Tensorflow, Jax, Pytorch

Mechatronics:

Circuit Prototyping, PCB manufacturing, soldering, laser-cut, 3D printing

Programming Language and Software Proficiency:

Python, Java, C/C++, MatLab, Go, Javascript, Robot Operating System (ROS), L^AT_EX

Languages:

Chinese (native), English (proficient)