Yuxiang Yang

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Education

University of Washington *Sep.2020 — present*

Ph.D 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

Graduate Student Researcher, Robot Learning Lab Sep.2020 — present
Research area: robot locomotion and control, hierarchical reinforcement learning, robot perception
- Designed hierarchical reinforcement pipeline for gait transition and efficient locomotion.
- Developed python interface and simulation environment for Unitree's A1 robot.

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.

Teaching

Teaching Assistant University of Washington
Machine Learning Fall 2021

Teaching Assistant UC Berkeley
Discrete Math and Probability Theory Fall 2016, Spring 2017, Fall 2017
Algorithms Spring 2018

Publications

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 Systems 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 Learning
Xingyou 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 Fearin
International Conference on Robotics and Automation (ICRA) 2019

Honors & Awards

UC Berkeley EECS Major Citation May.2018

UC Berkeley EECS Honor's Student Jun.2017—May.2018

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), LaTeX

Languages:
Chinese (native), English (proficient)