YANDONG JI

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EDUCATION

University of California at Berkeley, USA Aug 2021 - May 2022

· M.Eng. in Mechanical Engineering

Nankai University, China Aug 2017 - June 2021

· B.S. in Intelligent Science and Technology

· AWARDS: Innovation and Entrepreneurship Scholarship, Academic Excellence Scholarship, Global Nankai Scholarship.

University of California at Berkeley, USA Jan 2020 - Aug 2020

· Exchange Student

RESEARCH EXPERIENCE

Reinforcement Learning for Soccer Dribbling Skills using Quadrupedal Robots May 2022 - Present
Improbable AI Laboratory, Massachusetts Institute of Technology

· Trained the policy with domain randomization such as ball position detection delay, ball radius difference and terrain friction to control the robot to dribble a soccer ball on both flat ground and grass land following a parameterized velocity command.

· Deployed a color based segmentation method to detect a soccer ball using both onboard cameras and onboard computers.

Reinforcement Learning for Soccer Shooting Skills using Legged Robots Aug 2021 - May 2022
Hybrid Robotics Laboratory, University of California at Berkeley

· Developed a bipedal robot control method based on DeepMimic imitation learning to balance with one foot and track arbitrary foot trajectories in simulation.

· Developed a quadrupedal robot soccer shooting framework that was able to fine-tune the policy in real world.

Collaborative Quadrupedal Manipulation of a Payload March 2020 - March 2021
Hybrid Robotics Laboratory, University of California at Berkeley

· Simultaneously used 4 quadrupedal robots to manipulate a payload and to go in straight and in a quarter of circle in both ROS and Raisim.

· Designed a decentralized RL control method to manipulate multiple quadruped robots on a challenging terrain in Raisim.

· Controlled the quadrupedal robots by parameterized velocities.

Research on metabolic costs & Human ankle detection May 2019 - Dec 2020
Human-Computer Interaction and Gait Simulation Lab, NKU

· Led and conducted an experiment regarding the relationship between metabolic cost and speed, slope, payload.

· Analyzed the correlations of metabolic cost with different walking frequencies under the assistance of ankle exoskeleton.

PUBLICATIONS

Yandong Ji*, Gabriel Margolis*, Pulkit Agrawal. Reinforcement Learning for Quadrupedal Dribbling in the Wild. Submitted to International Conference on Robotics and Automation (ICRA) 2023.

Yandong Ji*, Zhongyu Li*, Yinan Sun, Xue Bin Peng, Sergey Levine, Glen Berseth, Koushil Sreenath. Hierarchical Reinforcement Learning for Precise Soccer Shooting Skills using a Quadrupedal Robot. IEEE International Conference on Intelligent Robots and System (IROS) 2022, **Best RoboCup Paper Award Finalist**.

Yandong Ji, Bike Zhang, Koushil Sreenath. Reinforcement learning for collaborative quadrupedal manipulation of a payload over challenging terrain. IEEE International Conference on Automation Science and Engineering (CASE) 2021.

Wei Wang, Jianyu Chen, **Yandong Ji**, Wei Jin, Jingtai Liu, Juanjuan Zhang. Evaluation of lower leg muscle activities of human walking assited by an ankle exoskeleton. IEEE Transactions on Industrial Informatics 2020

Yandong Ji, Xunan Liu, Xiaoqing Zhu. Robot Autonomous Navigation Based on Program Learning in Dynamic Environment. IEEE IMCEC 2019

SERVICE

2022 International Conference on Intelligent Robots and Systems, *reviewer*

POSITION OF RESPONSIBILITY

Minister of Art Department June 2018 - June 2019
College of Artificial Intelligence

· Arranged 2018-2019 New Year Eve Gala of the college and organized the activity "Guessing the Riddle" on Lantern Festival.