Ruihan Yang
杨睿涵

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http://RchalYang.github.io

EDUCATION

UC San Diego
Ph.D in Machine Learning
San Diego, CA
Sep. 2021 - Present

UC San Diego
M.S in Computer Science
San Diego, CA
Sep. 2019 - Mar. 2021

Nankai University
B.E in Software Engineering
Tianjin, China
Sep. 2015 - Jul. 2019

PUBLICATIONS & PREPRINTS

[1] **Harmonic Mobile Manipulation**
Ruihan Yang, Yejin Kim, Aniruddha Kembhavi, Xiaolong Wang, Kiana Ehsani
Arxiv, 2023

[2] **Generalized Animal Imitator: Agile Locomotion with Versatile Motion Prior**
Ruihan Yang*, Zhuoqun Chen*, Jianhan Ma*, Chongyi Zheng*, Yiyu Chen, Quan Nguyen, Xiaolong Wang
Arxiv 2023, Workshop Best Paper @ CORL 2023 Deployable Workshop

[3] **Neural Volumetric Memory for Legged Locomotion Control**
Ruihan Yang, Ge Yang, Xiaolong Wang
CVPR 2023 (Highlight)

[4] **Learning Vision-Guided Quadrupedal Locomotion End-to-End with Cross-Modal Transformers**
Ruihan Yang*, Minghao Zhang*, Nicklas Hansen, Huazhe Xu, Xiaolong Wang
ICLR 2022 (Spotlight)

[5] **Vision-Guided Quadrupedal Locomotion in the Wild with Multi-Modal Delay Randomization**
Chieko Sarah Imai*, Minghao Zhang*, Yuchen Zhang*, Marcin Kierebiński, **Ruihan Yang**,
Yuzhe Qin, Xiaolong Wang
IROS 2022

[6] **DexMV: Imitation Learning for Dexterous Manipulation from Human Videos**
Yuzhe Qin*, Yueh-Hua Wu*, Shaowei Liu, Hanwen Jiang, **Ruihan Yang**, Yang Fu, Xiaolong Wang
ECCV 2022

[7] **Multi-Task Reinforcement Learning with Soft Modularization**
Ruihan Yang, Huazhe Xu, Yi Wu, Xiaolong Wang
NeurIPS 2020

[8] **Suphx: Mastering Mahjong with Deep Reinforcement Learning**
Junjie Li, Sotetsu Koyamada, Qiwei Ye, Guoqing Liu, Chao Wang, **Ruihan Yang**, Li Zhao, Tao Qin,
Tie-Yan Liu, Hsiao-Wuen Hon
Arxiv 2020

INDUSTRIAL EXPERIENCE

Allen Institute for AI (AI2)
Research Intern @ PRIOR. Work with Dr. Kiana Ehsani
Seattle, WA
Jun. 2023 - Dec 2023
- Work on Emboddied AI

Adobe Research
Research Intern. Work with Dr. Ruben Villegas, Dr. Duygu Ceylan
San Jose, CA(Remote)
Jun. 2021 - Dec. 2021
- Work on Motion Style Transfer

Microsoft Research Asia
Research Intern at Machine Learning Group. Work with Qiwei Ye, Dr. Tao Qin
Beijing, China
Mar. 2018 - Jun. 2019
- Built AI for Mahjong (One of the hardest imperfect-information game, **most popular board game in East Asia**, well matched to the **top professional human player**

Professional Service

Conference Reviewer	ECCV 2022 / CVPR 2023 / ICCV 2023 / NeurIPS 2023 / ICLR 2024
	AAAI 2021,2023,2024 / ICRA 2022,2023 / IROS 2023 / Humanoids 2023
Journal Reviewer	RA-L

Teaching Experience

- **Math 155A: 3D Computer Graphics** *Fall. 2020*
  Teaching Assistant

- **ECE 176: Introduction to Deep Learning and Applications** *Winter. 2021 / Winter. 2023*
  Teaching Assistant

Honors & Awards

- First Class Scholarship for Nankai University Undergraduate (Top 5%) *Dec. 2016, Dec. 2017*
- Public Dedication and All-round Capability Scholarship(15/96), Nankai University *Oct. 2018*

Selected Projects

- **TorchRL** *Dec. 2018 - Present*
  Personal implementation of various RL algorithms
  - Implemented various RL methods: off-policy and on-policy methods.
  - Earned over 150 stars on github.

- **AI for Prosthetics** *Jul. 2018 - Nov.2018*
  NIPS 2018: AI for Prosthetics Challenge
  - Developed a controller to enable a physiologically-based human model with a prosthetic leg to walk and run.
  - Trained robotic controller using Proximal Policy Optimization(PPO), with symmetric loss / observation engineering / reward shaping / model using residual blocks. / dense goal-conditioned model
  - Ensembled multiple actors to cope with different circumstances
  - **Rank: 9th** (round1), **10th** (round2) & **Average Reward: 9800+**/10000

Skills & Interests

Programming Languages	C++/Python/C/Java/Bash/Latex/SQL
Techniques	Git/OpenMP/SIMD/MPI/CUDA/Docker/Pybind/Pytorch/Tensorflow