Jinhan Li

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EDUCATION

Tsinghua University **Beijing, China**

Bachelor's Degree in Engineering, Institute for Interdisciplinary Information Sciences *Aug. 2021 - Jun. 2025 (Expected)*

✧ Yao Class, directed by Turing Award laureate Andrew Chi-Chih Yao.

✧ Cumulative GPA: 3.84/4.0

University of Texas at Austin **Austin, US**

Visiting Student, Department of Computer Science *Feb. 2024 - Aug. 2024*

PUBLICATIONS (* Equal Contribution)

[1] **Jinhan Li**, Yifeng Zhu*, Yuqi Xie*, Zhenyu Jiang*, Mingyo Seo, Georgios Pavlakos, Yuke Zhu. OKAMI: Teaching Humanoid Robots Manipulation Skills through Single Video Imitation. *The 8th Annual Conference on Robot Learning (CoRL), 2024*. Oral Presentation.

[2] Yunfei Li, **Jinhan Li**, Wei Fu, Yi Wu. Learning Agile Bipedal Motions on a Quadrupedal Robot. *2024 IEEE International Conference on Robotics and Automation (ICRA)*. ICRA EXPO Best Demo Finalist.

[3] Zhuorui Ye*, **Jinhan Li***, Rongwu Xu. Sing it, Narrate it: Quality Musical Lyrics Translation. *In Findings of the Association for Computational Linguistics: EMNLP, 2024.*

[4] Yutao Ouyang*, **Jinhan Li***, Yunfei Li, Zhongyu Li, Chao Yu, Koushil Sreenath, Yi Wu. Long-horizon Locomotion and Manipulation on a Quadrupedal Robot with Large Language Models. *Technical report arXiv: 2404.05291, April 2024.*

[5] Zhenyu Jiang*, Yuqi Xie*, **Jinhan Li**, Ye Yuan, Yifeng Zhu, Yuke Zhu. Harmon: Whole-Body Motion Generation of Humanoid Robots from Language Descriptions. *The 8th Annual Conference on Robot Learning (CoRL), 2024.*

RESEARCH EXPERIENCE

Humanoid Robots Learning from Single Human Videos **Austin, US**

Advisor: Yuke Zhu | RPL Lab at UT Austin *Feb. 2024 - Aug. 2024*

✧ Developed an algorithm for humanoids to imitate from single human videos and perform diverse manipulation tasks, without any teleoperation. **First-authored paper accepted at CoRL 2024 as an oral presentation (top 5%).**

✧ Extracted a reference manipulation plan from the human video with open-world vision models, then generated humanoid motions at test time through object-aware retargeting algorithm. Enabled a humanoid to perform bimanual dexterous manipulation tasks in diverse visual and spatial conditions.

Long-Horizon Loco-Manipulation of Quadrupedal Robots **Beijing & Shanghai, China**

Advisor: Yi Wu | IIIS at Tsinghua University *Sep. 2023 - Feb. 2024*

✧ Developed a hierarchical system for long-horizon task and motion planning, which allowed a quadruped to perform long-horizon loco-manipulation tasks in daily environments, such as delivering a package and turning off lights. **Co-first authored paper in submission for ICRA 2025.**

✧ Using three LLM agents to collaboratively reason and decompose long-horizon tasks into a code plan, which calls a sequence of parameterized primitive skills trained with reinforcement learning.

Large Language Model for Musical Translation **Beijing, China**

Advisors: Zhilin Yang, He Cheng | IIIS at Tsinghua University *Sep. 2023 - Feb. 2024*

✧ Motivated by the real-world problem of musical translation. Developed a method for English-to-Chinese lyric translation, generating lyrics that are high quality and satisfy singablility constraints. **Co-first authored paper accepted at EMNLP 2024 (Findings).**

✧ Collected an evaluation dataset for training reward models that reflect human preferences. Developed a two-stage training and an inference-time optimization framework to balance multiple aspects, surpassing baselines in both quantitative and human evaluations.

Bipedal Motion Generation on Quadrupedal Robot **Beijing & Shanghai, China**

Advisor: Yi Wu | IIIS at Tsinghua University *Jul. 2023 - Sep. 2023*

✧ Enabled a quadrupedal robot to stand on two hind legs and perform complex bipedal dancing, such as ballet, boxing, and greetings, basing on multi-modal human commands. **Second-authored paper accepted at ICRA 2024 and awarded ICRA EXPO Best Demo Finalist (5/81).**

✧ Trained a task-agnostic motion controller in simulation using reinforcement learning, with domain randomization for sim-to-real transfer. Task-specific motions are generated by either retargeting from human video or interpreting natural language inputs with LLM.

PRESENTATION

✧ *OKAMI: Teaching Humanoid Robots Manipulation Skills through Single Video Imitation*

Yao Seminar Presentation *Oct. 2024*

CoRL 2024 Oral Presentation *Nov. 2024*

SELECTED AWARDS

National Scholarship | The Highest Honor for Undergraduate Students in China (Top 0.2%) *Oct. 2024*

Tsinghua – TikTok Scholarship | Academic Excellent Award, Tsinghua University *Oct. 2024*

Yao Award | The Highest Honor in Yao Class (Top 20%) *Aug. 2024*

Tsinghua - Geru Zheng Scholarship | Comprehensive Excellent Award, Tsinghua University *Oct. 2023*

China National Olympiad in Informatics (NOI) 2020 | Silver Medal in Competitive Programming *Aug. 2020*

OTHERS

Community Service: Pacer of Tsinghua student running club; Department vice-president of IIIS student union.

Programming Languages: Python, C++, C, LaTeX.

Libraries and Tools: PyTorch, Git, LaTex, Isaacgym, MuJoCo.

Languages: Chinese (Native), English (Fluent, TOEFL 112).