Jinhan Li

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EDUCATION

Tsinghua University <div align="right">**Beijing, China**</div>

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 <div align="right">**Austin, US**</div>

Visiting Student, Department of Computer Science <div align="right">*Feb. 2024 - Aug. 2024*</div>

PUBLICATION (* 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 <div align="right">**Austin, US**</div>

Advisor: Yuke Zhu | RPL Lab at UT Austin <div align="right">*Feb. 2024 - Aug. 2024*</div>

✧ Developed the first algorithm that enable humanoid robots to imitate single human videos and perform diverse manipulation tasks in real-world scenarios, without laborious teleoperation. **First-authored paper accepted at CoRL 2024 as an oral presentation (top 5%).**

✧ Generated a reference manipulation plan from the human video with open-world vision models, then developed an object-aware retargeting algorithm to map human motions onto the humanoid robot, adapting to object locations at deployment time, which generalizes to varying visual and spatial conditions.

Long-Horizon Loco-Manipulation of Quadrupedal Robots <div align="right">**Beijing & Shanghai, China**</div>

Advisor: Yi Wu | IIIS at Tsinghua University <div align="right">*Sep. 2023 - Feb. 2024*</div>

✧ Expanded the capabilities of quadrupedal robots to perform long-horizon locomotion and manipulation tasks, such as delivering a package and turning off lights. **Co-first authored paper in submission for ICRA 2025.**

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

Large Language Model for Musical Translation <div align="right">**Beijing, China**</div>

Advisors: Zhilin Yang, He Cheng | IIIS at Tsinghua University <div align="right">*Sep. 2023 - Feb. 2024*</div>

✧ Focused on real-world musical translation, developing a method for English-to-Chinese lyric translation with high quality and satisfying singablility constraints. **Co-first authored paper accepted at EMNLP 2024 (Findings).**

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

Reinforcement Learning for Quadrupedal Robot <div align="right">**Beijing & Shanghai, China**</div>
Advisor: Yi Wu | IIIS at Tsinghua University <div align="right">*Jul. 2023 - Sep. 2023*</div>

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

✧ Developed a task-agnostic motion controller using reinforcement learning with domain randomization for sim-to-real transfer. The controller executes task-specific motions from human video retargeting or natural language inputs.

PRESENTATION

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

Yao Seminar Presentation <div align="right">*Oct. 2024*</div>
CoRL 2024 Oral Presentation <div align="right">*Nov. 2024*</div>

SELECTED AWARDS

National Scholarship | The Highest Honor for Undergraduate Students in China (Top 0.2%) <div align="right">*Oct. 2024*</div>
Tsinghua – TikTok Scholarship | Academic Excellent Award, Tsinghua University <div align="right">*Oct. 2024*</div>
Yao Award | The Highest Honor in Yao Class (Top 20%) <div align="right">*Aug. 2024*</div>
Tsinghua - Geru Zheng Scholarship | Comprehensive Excellent Award (Top 20%), Tsinghua University <div align="right">*Oct. 2023*</div>
China National Olympiad in Informatics (NOI) 2020 | Silver Medal in Competitive Programming <div align="right">*Aug. 2020*</div>

OTHERS

Community Service: Pacer of Tsinghua student running club; Department vice-president of Yao Class student union.
Programming Languages: Python, C++, C.
Libraries and Tools: PyTorch, Git, LaTex, Isaacgym, MuJoCo.