HAOCHEN LIU

Focus: Humanoid Robot RL and Motion Control / Embodied AI
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EDUCATION

University of Michigan, School of Information **Aug. 2025 - Present**
M.S. in Information (Big Data Analytics) Ann Arbor, MI, USA
- Relevant coursework: EECS 545 Machine Learning; ROB 510 Robot Kinematics and Dynamics (in progress); CSE 598-014 Action and Perception (in progress); SI 504 Servers, Shell, and Git; SI 506 Programming I; SI 507 Intermediate Programming; SI 544 Introduction to Statistics and Data Analysis; SI 618 Data Manipulation and Analysis. Independent study (selected online lectures): UC Berkeley CS 285 Deep Reinforcement Learning.

Tsinghua University, Academy of Arts & Design **Sept. 2018 - July 2024**
B.A. in Industrial Design (Product Design) Beijing, China
- Relevant coursework: Programming Fundamentals (C/C++); Mathematics for Arts (Calculus and Linear Algebra); Computer-Aided Design; Manufacturing Engineering Practice

INTERNSHIP AND PROJECT EXPERIENCE

DeepCybo (Beijing) Technology Co., Ltd. **May 16, 2026 - Present**
Humanoid Robot RL and Motion Control: Unitree G1 Soccer and PrimeU Dexterous Manipulation Beijing, China
- Scope: Developed humanoid RL motion control for Unitree G1 soccer and PrimeU 60-DoF upper-body manipulation; collected 5.20 hours of raw soccer motion capture with synchronized human and ball rigid bodies.
- Method: Built a GVHMR/GMR/BeyondMimic pipeline for motion capture, retargeting, and policy training; calibrated robot, ball, and ground physics in Isaac Lab, Isaac Sim, and MuJoCo.
- Results: Deployed a complete soccer-shooting policy on a physical Unitree G1 via ONNX; trained a stable 30.26-second ball-control tracker (99.2% time-limit rate); maintain a PrimeU upper-body platform in Ann Arbor for small-scale validation.

EECS 545 Final Project: SpaRe-lite - Spatial Representation Rewards for VLA Reinforcement Learning **Mar. 2026 - Apr. 2026**
Project Lead / Machine Learning Ann Arbor, MI, USA
- Scope: Led SpaRe-lite to test spatial-representation rewards for sparse-reward VLA tasks under limited compute, using offline RL with OpenVLA-OFT/SimpleVLA-RL on LIBERO-10.
- Method: Compared task/data reward R1 with cosine-similarity representation reward R2; built 409 simulated offline rollout transitions containing both successful and failed cases.
- Results: Exported OpenVLA-OFT checkpoints for R1 and R1 + lambda R2; LIBERO-10 success increased from 16.13% (SFT) to 17.20% (R1) and 18.40% with the spatial reward.

Zhongguancun Academy x Zhongguancun Institute of Artificial Intelligence **Apr. 17 - Sept. 11, 2025**
Full-Size Humanoid Robot Design Beijing, China
- Scope: The PrimeU humanoid platform was jointly supported by Zhongguancun Academy and Zhongguancun Institute of Artificial Intelligence.
- Method: Contributed to morphology, joint-module selection, whole-body layout, transmission design, and URDF refinement; independently led the robot's industrial design.
- Results: Delivered 3D models, joint/motor-module enclosure designs, and a simulation-ready URDF.

Noetix Robotics (Beijing) Technology Co., Ltd. **Feb. 2025 - Apr. 2025**
Industrial Design Beijing, China
- Designed the Xiao Nuo bionic robot; completed NURBS surface modeling and structural integration while refining topology, display placement, neck transitions, and manufacturable shell geometry.

Beijing Kuaishou Technology Co., Ltd. **Feb. 2024 - June 2024**
Commercialization Product Manager Beijing, China
- Supported feature iteration for the Kuai for Business DSP platform and researched self-attribution strategies for ad delivery.

Pan Asia Technical Automotive Center Co., Ltd. (PATAC) **June 2021 - Feb. 2022**
Automotive Interior Design Shanghai, China
- Competed in the 7th SAIC-GM ICCG automotive design competition and received the Automotive Design Excellence Award.

SELECTED PUBLICATION

- Co-author, Human-as-Humanoid: Enabling Zero-Shot Humanoid Learning from Ego-Exo Human Videos with Human-Aligned Embodiments. arXiv:2606.32009 [cs.RO], 2026.

COMMUNITY CONTRIBUTIONS

- Contributor, Tsinghua Lunar Exploration Embodied Intelligence Club, Technology Insights | Weekly Research Trends: selected robotics/AI papers and wrote summaries and Chinese technical explanations.
- Writer, EID Embodied Intelligence Innovation Center, EID Insights | Weekly Research Trends: selected topics, organized sources, and wrote Chinese weekly reports.