Zhenyang Chen

Always exploring and making robot smarter.
Georgia Tech, Atlanta, GA, 30332 — chenzy086@gmail.com — https://chenzheny.github.io/

EDUCATION

Georgia Institute of Technology, Atlanta, GA — Sep 2024 — Present
Ph.D. in Robotics, advised by Prof. Danfei Xu

Georgia Institute of Technology, Atlanta, GA — Sep 2022 — May 2024
Master of Science in Robotics — Cumulative GPA: **4.00/4.00**

Massachusetts Institute of Technology, Cambridge, MA — Sep 2021 — May 2022
Exchange Student in Mechanical Engineering — Cumulative GPA: **4.90/5.00**

Southern University of Science and Technology, Shenzhen, China — Sep 2018 — Jun 2022
Bachelor of Engineering in Robotics Engineering — Cumulative GPA: **3.76/4.00**

SKILLS

- **Language:** Fluent in English, Mandarin, Cantonese, and prompt engineering
- **Programming:** Python, MATLAB, C/C++, Java, CMake, HTML, Bash
- **Machine Learning:** Pytorch, Tensorflow, JAX, OpenAI Gym, Huggingface, RL Libraries, Robomimic, Distributed Training, etc.
- **Robot Software:** ROS, ROS2, Catkin, Colcon, Moveit!, OpenCV, Simulation: Gazebo, Pybullet, Mujoco, Nvidia Isaac sim/gym/lab, Robosuite, etc.
- **Robot Hardware:** Solidworks, Fusion 3D, 3D/Laser Printing, Raspberry Pi, Arduino, STM32, Mobile Robots, Manipulators, Locomotion, Dexterous Manipulations, 3D Perception, Sensors, Actuators, Basic PCB Circuit Design
- **DevOps and Misc:** Docker, Git toolchain, Slurm, Zero-MQ, LCM, Photoshopt, Office, Notion

WORK AND RESEARCH EXPERIENCES

Research Intern — May 2024 - Aug 2024
Shanghai Qizhi Institute (Shanghai AI Lab) — Shanghai, China

- Work with Prof. Huazhe Xu. Research on efficient data generation for imitation learning.
- Work on reinforcement learning for mobile dexterous manipulation.

Student Researcher — Jan 2023 - Jan 2024
Georgia Institute of Technology — Atlanta, GA

- Work with Prof. Yongxin Chen. Exploring stochastic control and reducing uncertainty in planning.

Student Researcher — Jan 2022 - Aug 2022
Massachusetts Institute of Technology — Cambridge, MA

- Work with Prof. Sangbae Kim. Research on humanoid robot trajectory optimization.

Research Intern — May 2021 - Aug 2021
Tsinghua University — Beijing, China

- Work with Prof. Jing Xu. Research on mitigating sim-to-real transfer for vision tactile sensors.

PUBLICATIONS

ImMimic: Cross-Domain Imitation from Human Videos via Mapping and Interpolation **CoRL 2025 (Oral)**
Yangcen Liu, Woo Chul Shin, Yunhai Han, Zhenyang Chen, Harish Ravichandar, Danfei Xu

SAIL: Faster-than-Demonstration Execution of Imitation Learning Policies CoRL 2025 (Oral)

Nadun Ranawaka Arachchige*, Zhenyang Chen*, Wonsuhk Jung, Woo Chul Shin, Rohan Bansal, Yu Hang He, Celine Lin, Benjamin Joffe, Shreyas Kousik*, Danfei Xu*

DemoGen: Synthetic Demonstration Generation for Data-Efficient Visuomotor Policy Learning **RSS 2025**
Zhengrong Xue*, Shuying Deng*, Zhenyang Chen, Yixuan Wang, Zhecheng Yuan, Huazhe Xu

Catch It! Learning to Catch in Flight with Mobile Dexterous Hands **ICRA 2025**
Yuanhang Zhang*, Tianhai Liang*, Zhenyang Chen, Yanjie Ze, Huazhe Xu

Learning prehensile dexterity by imitating and emulating state-only observations **RA-L, 2024**
Yunhai Han, Zhenyang Chen, Kyle A Williams, Harish Ravichandar

Efficient Belief Road Map for Planning Under Uncertainty **ArXiv 2024**
Zhenyang Chen, Hongzhe Yu, Yongxin Chen

Covariance Steering for Nonlinear Control-affine Systems **ArXiv 2024**
Hongzhe Yu, Zhenyang Chen, Yongxin Chen

Bi-Directional Sim-to-Real Transfer for GelSight Tactile Sensors with CycleGAN **RA-L 2022**
Weihang Chen*, Yuan Xu*, Zhenyang Chen*, Peiyu Zeng, Renjun Dang, Rui Chen, and Jing Xu

Improved Rover Mobility Over Loose Deformable Slopes through Active Control of Body-Rotating Mechanism **M2VIP 2021**
Shibo Lv, Yuntian Zhao, Zhenyang Chen, Chengyuan Gao, Longtent Hu, and Zhenzhong Jia

PROJECTS AND VOLUNTEERING

Controller for Full-Scale Indy Autonomous Racecar Feb 2022 – Jun 2023
MIT Driverless Team, Massachusetts Institute of Technology Cambridge, MA

- Improved LQR lateral controller for autonomous Indy racecar, decreased tracking error by **10%**.
- Tuned raceline optimization for Monza racetrack, reached the highest speed of **140mph**.

Trajectory Optimization for MIT Humanoid Robot Jan 2022 – Aug 2022
Biomimetic Robotics Laboratory, Massachusetts Institute of Technology Cambridge, MA

- Formulated and solved an optimal running trajectory for a reduced-order MIT humanoid model using direct transcription and interior point methods in MATLAB.
- Designed a LQR controller for trajectory tracking and verified foot torque's role in pose control.

Graduate Teaching Assistant Jan 2023 - Present
Georgia Institute of Technology Atlanta, GA

- Assisted more than 100 students in one of the largest Artificial Intelligence (AI) courses in US.
- Delivered "AI in Robotics" lectures; supported students via office hours and supplementary materials.

President of College Peer Mentors June 2020 - June 2021
Southern University of Science and Technology Shenzhen, China

- Led a team of 15 and held several popular activities attracting an audience of 200 plus.
- Provided one-on-one consultation and necessary companionship for 36 freshmen.

STEM Education Volunteer Sep 2018 - Jun 2021
Southern University of Science and Technology Shenzhen, China

- Developed STEM courses for primary students and delivered lectures in a local primary school.
- Organized volunteer training for the university and had more than **40 hours** of volunteer service.