Jinyu Zou

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EDUCATION

Tongji University 09/2021 – 06/2025
B.Eng. in Artificial Intelligence
GPA: 4.60/5.00 (91.03/100)

PUBLICATIONS

1. I. Chuang, **J. Zou**, A. Lee, D. Gao, I. Soltani.
   Look, Focus, Act: Efficient and Robust Robot Learning via Human Gaze and Foveated Vision Transformers.
   IEEE International Conference on Robotics and Automation (ICRA), 2026. **Second Author**.
   Project Page: https://ian-chuang.github.io/gaze-av-aloha/

2. Z. Wang, C. Yang, R. Jiang, **J. Zou** et al.
   EDIL: An End-to-end Decoupled Imitation Learning Method for Stable Long-Horizon Bimanual Manipulation.
   IEEE Transactions on Industrial Informatics (TII, IF=10.7, JCR Q1), published, 2026.
   DOI: 10.1109/TII.2026.3679954
   Project Page: https://decoupledmani.online/

RESEARCH EXPERIENCE

Visiting Researcher — UC Davis, Mechanical & Aerospace Engineering 07/2025 – 10/2025
Project Page: https://ian-chuang.github.io/gaze-av-aloha/
Advisor: Prof. Iman Soltani

- Assisted in developing a real-robot teleoperation system for gaze-labeled manipulation demonstrations.
- Developed preprocessing and augmentation pipelines including gaze-conditioned cropping and foveated masking.
- Integrated pretrained models and adapted foveated ViT architectures for imitation learning.
- Reproduced algorithm modules from recent papers and benchmarked them on collected datasets.

Realman Dual-Arm Robot Simulation Environment (Independent Project) 09/2025
GitHub: `https://github.com/JinyuZou/realman_sim`

- Created a full MuJoCo simulation of the Realman(a robotics brand from China) dual-arm robot including URDF/XML modeling and actuation.
- Implemented joystick teleoperation and automated trajectory logging for imitation learning and RL.
- Designed modular dataset-generation tools supporting synchronized observation–action recording.

Long-Horizon Dual-Arm Manipulation with Multi-Modal Chain-of-Thought + ACT
03/2025 – 06/2025
Tongji University

- Built a long-horizon manipulation framework integrating visual, language, and speech modalities.

- Developed cross-modal semantic alignment for high-level task understanding.
- Implemented the ACT algorithm for primitive skill learning and dual-arm execution via ROS.

Mobile Robot Navigation System Development — Tongji University 03/2023 – 11/2024

- Optimized wireless positioning using sensor fusion to improve localization accuracy.
- Developed environmental mapping and multi-sensor integration modules for indoor autonomous navigation.

HONORS & SCHOLARSHIPS

Outstanding Graduate of Tongji University (Top 5%) 2025
Second-Class Scholarship, Tongji University 2022
Second-Class Scholarship, Tongji University 2023
Second-Class Scholarship, Tongji University 2024

SELECTED CAMPUS & VOLUNTEER EXPERIENCE

College SmartCar Race Competition Laboratory — Tongji University 09/2024 – 06/2025

- Supported daily lab operations and coordinated competition-related activities.
- Mentored junior students in project development and competition preparation.

Shanghai Science & Technology Museum — Volunteer 03/2023

- Assisted visitors at ticketing, provided directions, and supported families with strollers or large items.

Yangguang Jiayuan Community Activity Center 10/2023

- Engaged in interactive activities to support individuals with disabilities and foster an inclusive environment.

COMPETITIONS

The 6th DIGIX Global AI Challenge — First Prize (National Level) 11/2024

- Focused on autonomous navigation system development and AI model optimization.

China Robotics and Artificial Intelligence Competition — First Prize (National Level) 08/2024

- Contributed to robot navigation algorithms for dynamic environments.

National University Intelligent Car Competition — Second Prize (Provincial Level) 07/2024

- Developed embedded systems for autonomous vehicle control.

Intelligent Robot Fighting and Gaming Competition — First Prize (National Level) 10/2023

- Worked on robot path planning and control strategy design.

ADDITIONAL INFORMATION

Languages: Chinese (Native), English (Fluent)

Programming: Python, C++, Bash, CUDA (basic)

Machine Learning: PyTorch, Transformers, Diffusers, Gymnasium, Stable-Baselines3, TensorBoard, W&B

Robotics & Simulation: MuJoCo, URDF/XML modeling, AVAloha & Realman robots, teleoperation (VR/JoyCon/Xbox), gaze tracking, FK/IK

Tools: Git, Linux/Ubuntu, Docker, OpenCV, FFmpeg, Conda, SLURM, LaTeX

Interests: Badminton (amateur), cycling (amateur)