

Aaron Chou

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EXPERIENCE

Inventec Corporation, AI Center, Robotics, Advisor: Dr. Wei-Chao Chen Taipei, Taiwan
Robotics Research Engineer — Quadruped Robots Mar. 2025 – Present

- **Learning-Based Control:** Developed a low-level control SDK for quadruped platforms with no official API, enabling [deployment](#) of learning-based locomotion policies trained in **IsaacGym** and establishing reusable infrastructure.
- **Terrain-Aware Navigation:** Trained a 15 cm gap-traversal policy, implemented a feasibility-guided planning framework supporting skill selection on hybrid terrain, and contributed to an ICRA 2026 submission [\[1\]](#).
- **SLAM Optimization:** Improved single-LiDAR SLAM by **dual-LiDAR fusion** in [ICRA 2025 QRC](#), achieving a 65% reduction in mapping-to-navigation time and enabling rapid terrain reconstruction in dynamic environments.

Flytech Technology Co. Ltd. Taipei, Taiwan
Robotics Engineer — Autonomous Mobile Robots Mar. 2024 – Jan. 2025

- Engineered a [precise docking system](#) by integrating motion control, localization, and a customized rack tracker, achieving navigation accuracy of $\pm 1-1.5$ cm to minimize redocking attempts in production deployments.
- Developed and maintained **10+ ROS packages** and delivered a patrol demo showcased at Computex 2024.

Chien Kuo High School, FRC#8020 CyberpunkK Taipei, Taiwan
Youth Mentor — Mechanical Design Feb. 2022 – Jul. 2023

- Mentored 30+ students, guiding robot design, CAD/CAM, CNC fabrication, and testing of the [competition-ready robot](#).

EDUCATION

National Taiwan University (NTU), *B.Sc. in Mechanical Engineering* Taipei, Taiwan
Last 60 GPA: 4.03/4.3 | CGPA: 3.80/4.3 Sept. 2018 – Jan. 2023

- **Coursework:** Automatic Control, Digital Control System, Kinematics, Dynamics, Computer Programming

Aoyama Gakuin University (AGU), *Exchange Program* Tokyo, Japan
• **Coursework:** Data Structures and Algorithms, Introduction to Computer Systems Sept. 2022 – Jan. 2023

PUBLICATIONS

[1] **Y.-L. Chou**, L.-C. Wang, H. Mandala, C.-Y. Lee, W.-C. Chen, et al. *Feasibility-Guided Planning over Multi-Specialized Locomotion Policies*, IEEE International Conference on Robotics and Automation (ICRA), 2026, under review. [\(link\)](#)

PROJECTS

Isaac_MoveIt Manipulator Integration, *Collaborative Project* | [demo](#) Jun. 2025 – Present

- Integrated **IsaacSim** with **MoveIt2**, enabling manipulator control in simulation for future dexterous research.

Differential-Wheeled Robot, *Independent Project* Mar. 2022 – Aug. 2022

- Developed a SLAM-capable mobile robot by integrating LiDAR with an edge-computing platform for real-time mapping, laying the groundwork for later AMR development and quadruped research.

SKILLS

Robotics: IsaacGym, IsaacSim, ROS/ROS2 (navigation2, MoveIt2, FAST_LIO), Path Planning, Sensor Fusion, SLAM

Toolkits: Docker, Git, Blender, PCL, SolidWorks/CAM, LaTeX

Programming: Python, C++, Shell Scripting (Bash)

Languages: Mandarin (Native), English (Fluent), Japanese (Intermediate)

HONORS & COMPETITIONS

2025 ICRA Quadruped Robot Challenge (QRC) — Participation Certificate, Autonomous Atlanta, GA

2023 Admission to Tohoku University, M.S. in Mechanical Engineering Tohoku, Japan

2022 FIRST Robotics Competition (FRC) Sacramento Regional, Finalist (Team Mentor) Sacramento, CA

2020 Fall Dean's List Award (top 5% of the class in the semester) Taipei, Taiwan