

PENGYU JING

jingpengyu22@gmail.com

EDUCATION

National University of Singapore

PhD in Electrical and Computer Engineering

Singapore

August 2026 – Expected 2030

National University of Singapore

M.Sc. in Robotics

Singapore

August 2025 – July 2026

- Cumulative GPA: 4.45/5.0

University of Electronic Science and Technology of China (UESTC)

B.Eng. in Robotics Engineering

Chengdu, China

September 2021 – June 2025

- Cumulative GPA: 3.84/4.0

University of Cambridge

Frontier Research Program in Deep Learning and Deep Neural Networks

Cambridge, UK

January 2024 – February 2024

SKILLS

Programming: C/C++; Python; MATLAB

Robot Learning / ML: PyTorch, DSRL, PPO, VLA, $\pi 0$

Robotics / Simulation: ROS/ROS2, MPPI, FLASH, Isaac Sim, PyBullet, MuJoCo, LIBERO, MetaWorld

Hardware: STM32, CAN, UART, SPI, PCB Design, Altium Designer, SolidWorks, 3D Printing

PUBLICATIONS

Confidence-Gated Progress Reward Modeling for RL in Manipulation.

Yang, P. *, Wang, X. *, **Jing, P. ***, Wen, K. *, Qu, Y., Huang, Z., Fu, M., Liu, X., Shen, Y., & Shi, F. *CoRL*, 2026.

Enabling Robust Cloth Manipulation via Inference-Time Simulator-in-the-Loop Refinement.

Liu, X., Li, Y., Li, Z., **Jing, P.**, Huang, Z., Zhou, B., Zeng, Z., Luo, S., Qi, C., & Shi, F. *CoRL*, 2026.

Design and Testing of a Pleurotus pulmonarius Stick Cutting Machine.

Cai, C., **Jing, P.**, Wang, L., Niu, Q., Jiao, H., Ma, C., & Li, C. *Agriculture*, 14(10), 1795, 2024.

An Intermittent Fertilization Control System for Fruit Tree Crown Detection.

Yin, H., **Jing, P.**, Ma, C., Cao, L., Li, C., & Wang, L. *Agriculture*, 14(11), 1867, 2024.

PROJECT EXPERIENCE

ABU Robocon Elephant and Bunny Robots — National Champion Project

Electrical Group Leader (Supervisor: Prof. Rui Sun, UESTC Robocon Team)

September 2022 – August 2023

- Designed the main control board based on STM32F405, and developed embedded firmware for real-time motor control, sensor processing, and CAN-bus communication.
- Developed an encoder and six-axis IMU board based on STM32F722RET6, integrating ICM-42688 through SPI and CAN for encoder positioning and motion-state estimation.
- Engineered a DT35 laser-distance sensing board using STM32F302RCT6 and ADS8864 ADC sampling for real-time distance acquisition and digital filtering.
- Designed a compact FOC motor driver based on the VESC architecture, implementing torque, velocity, and position control loops.
- Integrated the complete ER robot using carbon-fiber square tubes and panels, connecting custom electronic modules through CAN and UART networks.
- Designed an ESP32-based handheld controller with NRF wireless communication for real-time remote robot operation.

HONORS & AWARDS

National Robotics Competition (Robocon) Champion

National Robotics Competition (Robocon) Best Design Award

ABU Asia-Pacific Robotics Competition (Robocon) Third Place

ABU Asia-Pacific Robotics Competition (Robocon) Best Design Award