

ZHENNAN JIANG

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🎓 EDUCATION BACKGROUND

Institute of Automation, Chinese Academy of Sciences, Ph.D. Candidate 2024 – Present

Major Courses: Reinforcement Learning, Natural Language Processing and Large Models

Central South University, Automation Major, Bachelor's Degree 2020 – 2024

Weighted GPA: 93.48 **Major Ranking:** 1/243 (Top 0.5%)

Major Courses: Artificial Intelligence (98), Python Programming (97), Principles of Embedded Systems (97)

👥 PROJECT EXPERIENCE

Efficient Online Visual Reinforcement Learning Algorithms, Leader January 2024 – May 2024

- **Motivation:** During online visual reinforcement learning training, the low expressive capacity of policies may lead to a low activation rate of neurons, causing policy degradation and performance decline.
- **Personal Contribution:** Innovatively used consistency models for policy modeling, and proved its effectiveness theoretically and experimentally.
- **Achievements:** Deployed the algorithm on DeepMind Control, MetaWorld, etc., achieving **SOTA** results in convergence performance compared to advanced algorithms. The paper is **accepted in NeurIPS2024**.

AgileX Sim2Real Challenge, Core Participant March 2024 – May 2024

- **Task Description:** Developed algorithms on the OmniGibson platform to detect common kitchen items and place them in specified locations.
- **Personal Contribution:** For the vision part, used YOLOv8 + GroundingDINO to solve false detections of single models, and proposed a method combining RGB threshold segmentation with depth point cloud to identify cabinet door handle positions; In workflow, proposed multi-frame detection, dead zone judgment.
- **Achievements:** Compared to the baseline, accuracy improved from 67.1% to **93.3%**, and time reduced from 900s to **629.02s**; **won International Second Place in the simulation stage and First Prize in the sim2real stage**.

IoT-based Monitoring System for Alzheimer's Patients, Leader May 2021 – November 2021

- **Motivation:** Addressed the three major issues of Alzheimer's patients—memory loss, difficulty in care, and tendency to wander off—by developing a monitoring system integrating face recognition, heart rate detection, and positioning.
- **Personal Contribution:** 1) data packaging: used ESP8266 following the MQTT protocol to package and send data to server; 2) data display: used ECharts for visualization and Django to read data stored in MySQL.
- **Achievements:** The only team among 3,000 to **simultaneously win National First Prize, Enterprise Elite Award, and Best Creativity Award** in that competition.

♥ AWARDS AND HONORS

Academic Honors

National Scholarship *3 2021–2024

University-level Special Scholarship *3 2021–2024

Outstanding Graduate of Hunan Province 2024

Outstanding Student Model (Top 30 students university-wide each year) 2023

Competition Honors

National First Prize, National College Embedded and Intelligent Interconnection Competition November 2021

International First Prize, AgileX Sim2Real Challenge held by ICRA2024 March 2024

International Second Prize, Mathematical Contest in Modeling (MCM) February 2022