Yidong Jiang

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Education

University of Wisconsin – Madison, WI, United States Aug. 2025 - Expected Jun. 2026
Visiting International Student, Advisor: Prof. Xiaobin Xiong
Research Areas: Humanoid Robotics, Whole-body Control and Teleoperation

McMaster University, Ontario Canada Jun. 2024 - Sep. 2024
Summer Visiting Student, Advisor: Prof. Rong Zheng
Research Areas: Mobile Computing, Machine Learning for Health

University of Science and Technology of China, Hefei, China Sep. 2022 - Expected Jul. 2026
Bachelor of Science in Data Science, Advisor: Prof. Yanyong Zhang (IEEE Fellow)
Research Areas: Perception, UAV Estimation and Control
Core Courses: Computer programming (A); Electromagnetism (A); Complex Analysis (A-);
Summer Internship (A); Machine Learning (A-); Deep Learning (A-)

Research Experience

Whole-Body Robot Teleoperation via Vive VR Aug. 2025 - Present
Advisor: Prof. Xiaobin Xiong (ME, UW-Madison)

- Developed a teleoperation platform, enabling real-time human–robot control and data collection.
- Achieved low-latency, high-synchronization performance between human motion and robotic execution.
- Currently extending the system to whole-body teleoperation, using Vive-G1 for motion mapping.
- Open-sourced the whole body teleoperation code on GitHub for public use and reproducibility. [code]

3D-UKF-Based Multi-Drone Tracking for Noised Environment UAV Perception Sep. 2024 - Jul. 2025
Advisor: Prof. Yanyong Zhang (Computer Science, USTC)

- This project involved reducing environmental noise and creating a 3D-IMM-UKF frame to track drones.
- The proposed method improved the signal-to-noise ratio (SNR), leading to higher UAV detection rates and accuracy.
- Core contributor to ***BSense: Wide-Area UAV Detection and Localization with 5G-Advanced Base Station***. Submitted to MobiCom 2026, September 3, 2025.

Radar-Based Sleep Safety and Health Monitoring Using Machine Learning Jun. 2024 - Present
Advisor: Prof. Rong Zheng (Computing and Software, McMaster University)

- Leading author. Designed a radar-based system for sleep monitoring using machine learning.
- Processed heart rate, respiration, and motion signals to classify sleep stages via a rule-based decision tree
- Currently in preparation for journal submission.

Monte Carlo Tree Search for Strategic Card Game Optimization May 2024 - Sep. 2024
Advisor: Prof. Kani Chen (Financial Mathematics, HKUST)

- Developed an AI agent for the strategic card game Guandan, integrating the gameplay logic with an interactive teaching platform
- Designed and implemented a Deep Monte Carlo–based reinforcement learning framework to learn optimal strategies and handle complex multi-agent decision-making.
- Achieved a 70% win rate against human players and analyzed scalability challenges facing the Monte Carlo Tree Search in high-dimensional combinatorial action spaces.

Skills

Computer Skills: C; C++; Python (PyTorch); Compiler; Latex; ROS2
English Proficiency: TOEFL 95 (R 28; L 22; S 23; W 22;)
Active on GitHub and Huggingface

Awards

USTC Fellowship (Top 25%) 2024
Best Improvement Scholarship (Top 30%) 2023
Outstanding Freshman Scholarship 2022