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, Humanoid Robotics

Macmaster University, Ontario Canada Jun. 2024 - Sep. 2024
Summer Visiting Student
Advisor: Prof. Rong Zheng, Mobile Computing

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), Perception
Core Courses: Computer programming (A); Electromagnetism (A); Complex Analysis (A-); Summer Internship (A); Machine Learning (A-); Deep Learning (A-)

Research Experience

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

- Developed a teleoperation platform integrating Vive VR and a Piper robotic arm, 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 on Vive-G1 for motion mapping.
- Open-sourced the arm teleoperation code on GitHub for public use and reproducibility. [code]

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

- This project involves reduce environmental noise and creating a 3D-UKF structure and using IMM-UKF to track drones.
- The proposed method improves the signal-to-noise ratio (SNR), leading to higher UAV detection rates and accuracy.
- Core contributor of ***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 and developed a radar-based system for sleep mnitoring using machine learning, reducing reliance on wearable sensors.
- Processed heart rate, respiration, and motion signals to classify sleep stages via a rule-based decision tree
- Preparing for journal submission.

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

- Developed an AI agent for the strategic card game Guandan, integrating teaching and gameplay.
- Designed a reinforcement learning framework based on the Deep Monte Carlo model to learn optimal strategies and adapt to complex multi-agent interactions.
- Achieved a win rate of 70%, demonstrating strong performance in high-dimensional decision spaces.
- Explored Monte Carlo Tree Search for improved adaptability, revealing scalability challenges inherent to high-dimensional combinatorial games

Skills

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

Awards

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