Zhixu Yue

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EDUCATION

Southwest University, Chongqing *Sep.2023 - Present*

Junior, Department of Automation, School of Computer and Information Science, School of Software

- GPA: 89.4/100 & 4.1/5.0
- Ranking: 1/98

EXPERIENCE

Research at Sun Yat-sen University **Shenzhen, Guangdong**

Research Assistant, Advisor: Prof. Ruimao Zhang *Aug.2025 - Present*

Project name: Whole-body Control for Humanoid Robots based on Visual Imitation Learning

- Extracted 3D human meshes from monocular human dance videos based on the GVHMR algorithm, utilized the GMR framework for motion retargeting, mapped human skeletons to the Unitree G1 robot, and generated reference motion sequences for training.
- Built an RL training framework based on BeyondMimic, conducted motion tracking training in the IsaacSim simulation environment, and monitored training results until metrics converged.
- Conducted sim2sim verification based on unitree_rl_lab, performed sim2real deployment after successful verification, and completed the reproduction of human dance motions.

Research at Chongqing Zhongke Automotive Software Innovation Center **Chongqing**

Project leader *Jun.2024 - Aug.2024*

Project name: Indoor Localization of Quadrotor UAV Based on Visual SLAM

- Assembled the drone by soldering and integrating hardware components such as Pixhawk 4 flight controller and Jetson Orin NX onboard computer; flashed PX4 firmware onto the flight controller, tuned PID parameters, and conducted takeoff testing.
- Deployed the ORB-SLAM algorithm on the onboard computer and performed debugging and adaptation using the official dataset.
- Remotely controlled the drone's flight and used the ROS2 system to interface with the depth camera. Applied the ORB_SLAM algorithm to perform sparse 3D reconstruction of the surrounding environment, and used Octomap tools and PCL algorithms to convert the point cloud into a 3D map.

Research at Southwest University **Chongqing**

Project leader *Jul.2024 - Aug.2024*

Project name: Design and Production of a Tic-Tac-Toe Game Human-Computer Interaction Device

- Used Stm32f103c8t6 microcontroller as the main control module, deployed Tic-Tac-Toe game algorithm, controlled the movement direction and distance of the robotic arm, and communicated with the vision module.
- Assembled a three-axis robotic arm using TB6600 motor driver, HGX28 stepper motor, and electromagnetic module; controlled by the main control module to grab and move the game pieces.
- Used OpenMV as the vision module, programmed and debugged threshold values to real-time recognize the positions of black and white game pieces, and communicated with the microcontroller via serial port.

AWARDS

- **National Scholarship** (Awarded twice, ¥10000, Top1%)
  Oct.2024 & Oct.2025
- **National First Prize** of National Undergraduate Embedded Chip and System Design Competition
  Aug.2025
- **National Third Prize** of Lanqiao Cup National Software and Information Technology Professional Talent Competition *Jul.2025*
- **First Prize** in Chongqing of National Undergraduate Electronics Design Competition
  Aug.2025
- **First Prize** in Chongqing of National Undergraduate Mathematical Contest in Modeling
  Sep.2024
- **Meritorious Winner** of American Mathematical Contest in Modeling (MCM)
  May.2024

SKILLS

Programming Python, C, MATLAB, PLC

Systems and Software Linux, ROS/ROS2, Isaac Sim, Multisim, Keil 5, SolidWorks, PS, PR, etc.