Yue Zhang

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EDUCATION

M.Sc., Mechatronics and Robotics & Medical Technology, Technical University of Munich   04/2022 – Present

Main Courses: Optimal Control, Robot Dynamics, Computational Intelligence, Nonlinear Control, Reinforcement Learning

State Examination, Dentistry, Heidelberg University, Germany   10/2021 – 03/2022

BEng, Mechanical Engineering, Shanghai Jiao Tong University, China   09/2016 – 07/2020

INTERNSHIP

Munich Institute of Robotics and Machine Intelligence, KI Fabrik (AI Factory), Munich (Germany) 02/2024 – Present

- Robot Teleoperation: Build a virtual reality-based teleoperation system for dual-arm robots (HTC VIVE and Franka Emika Panda Robots); Improve Haptic Feedback Teleoperation System and collect data (Force Dimension - sigma.7); Learning skill-based Robot Control Platform (MIOS), Programming new skills and controllers;
- Haptic Sensing: Integrating external force sensing information into MIOS; Estimating the state of objects using a visual tactile sensor;
- Others: Implementation of robot hand-eye calibration, 3D reconstruction, 6D pose estimation, Web development.

Siemens Healthineers, Innovation Center, Shanghai (China)   10/2023 – 02/2024

- Prototyping: Designed and developed a prototype autonomous mobile base for Digital Radiography (DR), planning movement routes based on the DR examination room layout; created a remotely controllable, obstacle-avoidant, and autonomous tracking chair base.
- Market Research: Explored the surgical robotics market, focusing on the technological approaches of puncture and orthopedic robots; evaluated potential collaborations between these robots and Siemens imaging equipment.

PROJECT

Course: Programming and control for human-robot interaction, The German Aerospace Center   11/2024 – Present

- Simulation Part: Build a 3-DOF robot in MATLAB/SIMULINK, implementing Kinematics and Dynamics, Joint Control, Collision Detection, Inverse Kinematics Control, Nullspace Optimizations, Full Cartesian Impedance Controller within it.
- Robot Programming: Implement simulation part in a real robot (KUKA LBR iiwa) using Sunrise.OS.

Practical Course: Introduction to ROS, TUM   04/2024 – 07/2024

- Implementing perception and offline path planning for the quadruped robot in the simulator.

Practical Courses: Industrial Software Engineering, Embedded Systems and Robots, TUM

- Control development for the robot FORBOT A4 (Fa. Roboterwerk) on the basis of a Raspberry Pi, program a microcontroller (STM32) to implement control of the robot.

PUBLICATION

Chen K, Shen Z, Zhang Y, et al. Learning Task Planning from Multi-Modal Demonstration for Multi-Stage Contact-Rich Manipulation[J]. arXiv preprint arXiv:2409.11863, 2024. [Accepted by ICRA2025]

TEACHING EXPERIMENCE

Teaching Assistant, Munich, Tutor for Course Information technology   08/2024 – Present

Teaching Assistant, Shanghai, Tutor for Course System Modeling, Analysis, and Control   03/2019 – 07/2019

SKILLS, PERSONAL INFORMATION

Programming	C/C++, Python, MATLAB/Simulink, Java, HTML/CSS/JavaScript, LaTeX
Languages	Chinese(native), English (good knowledge), German (good knowledge).
Sport	Long-distance hiking (If you're interested, the Hengduan Mountains (located in Western China) are my favorite region for hiking.), Fishing, Traveling around the world

Chinese Citizen