



## Anran Zhang

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🌐 LinkedIn Profile

## EDUCATION

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- **Master of Science, Technical University of Munich, Germany** 2021 - Present  
*Mechatronics and Robotics* GPA: 1.5
- **Bachelor of Science, Jilin University, China** 2016 - 2020  
*Automotive Engineering* GPA: 3.7/4.0

## EXPERIENCE

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- **Agile Robots AG** Sep 2023 - Present  
*Working Student* Munich, Germany
  - contribute to development of low level symbolic computation of kinematics and dynamics of YU robot
  - implement close-loop dynamics simulation of robot
  - maintain dependency of software packages using Conan and CMake
- **Munich Institute of Robotics and Machine Intelligence (MIRMI)** Mar 2023 - Aug 2023  
*Semester Thesis* Munich, Germany
  - Topic: "Visuo-Tactile Exploration of Unknown Rigid 3D Curvatures by Vision-Augmented Unified Force-Impedance Control" under supervision of Kübra Karacan and Prof. Sami Haddadin
  - proposed a visuo-tactile manipulation framework leveraging unified force-impedance control for arbitrary force/-motion policy with safety guarantee
  - combined visual perception and internal tactile sensing for real-time policy adaptation
  - a IROS paper submitted
- **Munich Institute of Robotics and Machine Intelligence (MIRMI)** Nov 2022 - Mar 2023  
*Research Intern* Munich, Germany
  - Learned working principles and the structure of skill-based robot control system(MIOS)
  - Studied unified force-impedance controller
  - Helped to set up robot demonstration program
- **Gspeed Electric Racing Team of Jilin University** Sep 2018 - Sep 2019  
*Team Manager* Jilin, China
  - Responsible for team management and statics competition
  - Took part in Formular Student competition in China and Japan
- **Gspeed Electric Racing Team of Jilin University** Sep 2017 - Sep 2018  
*Chassis Team Leader* Jilin, China
  - Designed and manufactured the carbon-fiber-reinforced polymers (CFRP) Monocoque
  - Responsible for ergonomie design of the race car (seat, control panel)

## COURSE PROJECTS

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- **Course Project: Autonomous System** Dec 2022 - Mar 2023
  - Controlled the drone with state machine in simulation environment for exploration
  - Constructed system with ROS, Responsible for trajectory planning of the drone
- **Course Project: Cyber-Physical Systems Lab: Autonomous Applications** Aug 2022
  - Designed controller for race car in ROS simulation environment
  - Tested control algorithm on a F1tenth car (integrated with lidar sensor)

## ACHIEVEMENTS

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- **Deutschlandstipendium** 2023/2024
- **Second Price in Formular Student China 2019** 2019
- **First Price in Formular Student China 2018** 2018

## TECHNICAL SKILLS AND INTERESTS

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**Languages:** Chinese(Native Speaker), English(CEFR C1), German(CEFR B2)

**Developer Tools:** C++, CMake, Conan, ROS, Python, Matlab

**Libraries:** Franka Control Interface (FCI), CasADi, Pinocchio, Eigen, Intel Realsense, Pointcloud Library

**Areas of Interest:** Robotics, Control Theory