ZHAO Wenjie

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EDUCATION BACKGROUND

East China University of Science and Technology (ECUST) *09/2019-07/2023*

- **Sino-German College of Technology**
- **B.Eng. in Electrical Engineering and Automation | GPA: 3.28/4.00 (84.99)**

Lübeck University of Applied Sciences(THL) *09/2019-07/2023*

- **Department of Electrical Engineering and Computer Science**
- **B.Eng. in Information Technology | GPA:2.0/4.0**

The University of Manchester(UoM) *09/2023-09/2024*

- **Department of Electrical Electronic Engineering**
- **MSc. in Robotics | GPA: 66.7**

English: TOEFL IBT(87), IELTS(7)

Computer: Proficient in Python, Java, C, C++, ROS, RViz, Gazebo, Comppeliasim, MATLAB, Arduino, Multisim and LTspice;
Familiar with Linux and MS Office.

Certificate: National Computer Rank Examination (Level 1)

Personal website: https://jcheems.github.io/#

RESEARCH & COMPETITION

Dissertation, **Manipulator remote control** *6/2024-09/2024*

- Develop a comprehensive simulation and remote control system for the FR3 robotic arm, focusing on wireless URDF transmission, accurate simulation, and real-time control of the physical robot.
- Successfully implemented the wireless transmission of URDF files using ROS, ensuring efficient sharing and visualization of the robot model across different devices.
- Modeled and controlled the FR3 robotic arm using Gazebo, RViz, and MoveIt, with Python scripting for precise end-effector control in the simulation environment.
- Integrated the real FR3 robotic arm into a two-device setup, demonstrating stable remote control performance through ROS and RViz.

Leader, **Leo Rover design** *9/2023-06/2024*

- Served as the team leader, responsible for organizing, coordinating, and managing the overall project timeline.
- Contributed to the design and development of the object recognition system, leveraging machine learning and computer vision techniques to achieve accurate target identification.
- Led the development of the robotic arm control and grasping algorithms, enabling the rover to autonomously grasp and retrieve the target.
- Completed the majority of the work related to object recognition and robotic arm grasping, ensuring the project was successfully delivered on time.

Leader, **Course Project for *Automation Systems Robotics*** *11/2022-01/2023*

- Wrote a program to enable the robot to recognize cuboid target blocks and perform functions like grabbing and lifting.
- Drew a D-H coordinate transformation diagram according to the default position of the reset mechanical arm and obtained the D-H parameter.
- Controlled the steering engine to rotate through the microcontroller module so as to control the mechanical arm.
- Recognized images through the visual servoing system, processed them through NI Vision Assistant, determined whether the target block was in the region, and transmitted parameters of the four corners to the program for later capture.
- Uploaded the code to the microcontroller by Arduino and ran the program to allow the mechanical arm to

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identify, grab and pick up objects automatically.
- Completed the course project and scored 96.

Leader, **Course Project for *Software Engineering*** *06/2022-07/2022*
- Wrote a recipe program with Java based on the Model-View-Controller (MVC) structure, and met basic requirements, such as realizing functions like search, recipe & comment addition, deletion, modification and query, and picture import, as well as extra requirements, such as designing a login interface and a user system.
- Decided the UI form for each interface and created interfaces using Scene Builder.
- Determined the content of the project, such as the running logic of the program, the interconnections between sections and the formats of data storage and presentation, designed the search module, and applied the write function in the ImageIO interface in Java to replace the picture of the recipe.
- Built the project structure with Idea, including Packet in MVC structure and data structures in the database, and wrote functional code.
- Imported UI into the project package, established contact between Idea and the database through Access, drew control flow graph, conducted coverage testing, JUnit testing and usability testing, and modified the program based on feedback.
- Completed the course project and scored 95.

Member, **The 6th China International College Students' "Internet+" Innovation and Entrepreneurship Competition** *10/2019-10/2021*
- Aimed to explore the value structure of Chinese animation subculture under the background of the new era and discuss the opportunities, challenges and countermeasures of the development of the domestic animation industry.
- Analyzed the industrial structure and summarized the opportunities and challenges as well as the dual identity of animation culture.
- Referred to the successful experience of the foreign countries and concluded the operational situations of those successful foreign animation industry chains.
- Investigated specific phenomena during the development of the Chinese animation industry, summed up the characteristics of animation culture development in specific regions of China, and studied the impacts of media technology on the animation industry.
- Compared domestic and foreign animation history, explored the universal law of how animation subculture affected the development of the animation industry, and summarized the universal law and different parameters of domestic and foreign industry chains.
- Explored the phenomenon of fast food and mindless imitation in the market, identified existing problems, such as ambiguous identity and unclear appeals to value, and put forward corresponding solutions.
- Won Excellence Award and published a paper.

Leader, **C++ Course Project** *11/2020-01/2021*
- Aimed to create a virtual tic-tac-toe engine via C++.
- Analyzed the rules of the tic-tac-toe game, wrote a program in Visual Studio to gather input, and judged the outcome.
- Connected the project and code in Unreal Engine through the interface C++ provided.
- Finished the project and scored 100.

INTERNSHIP EXPERIENCE

Intern, **Marketing Department, Weidmuller Interface (Shanghai) Co., Ltd.** *11/2021-01/2022*
- Sorted out components with different functions by reading articles in frontier journals and classified them.
- Drew circuit diagrams with Multisim and used company tools to put basic components together to build fixed structures based on client requirements.
- Gathered market information and analyzed data of clients and competitors.

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- Assisted the marketing team in planning activities, including contacting customers on the phone, checking the procedures, preparing gifts, and collecting business cards.

STUDENT WORK

Monitor, **Class 190, Sino-German College of Technology, ECUST** *09/2019-07/2023*

- Managed daily affairs, helped the school counselor arrange class activities, and organized classmates to do voluntary work.
- Helped win the ECUST Advanced Class for Good Learning Conduct in 2020.

Minister, **Department of Social Practice, Students' Union, ECUST** *10/2019-07/2021*

- Responsible for internal affairs, venue layout of various activities and seeking sponsorship.
- Held large-scale activities such as the red song gathering and new year's eve party, and acquired more than 8,000 CNY sponsorship in total.

PUBLICATION

Fourth Author, ***Opportunities, Challenges and Countermeasures of the Development of China's Animation Industry in the New Era***, Global Market, 219-221 (CN46-1042/F, ISSN1005-9644) *09/2019*

AWARDS

Third-Class Scholarship for Academic Excellence, ECUST *11/2022 & 11/2020*
Grade A Scholarship for Social Work, ECUST *09/2022 & 09/2020*
Excellent Student Manager, ECUST *05/2021*
Provincial Second Prize, National English Translation Competition for College Students (Group C) *12/2020*
First Prize, College Students' Themed Speech Contest, ECUST *09/2019*
Outstanding Graduate of Shanghai Ordinary Colleges and Universities *06/2023*