



## Personal Information

**Age:** 23  
**Gender:** male  
**Native place:** Chengde

## Educational background

**School:** SHOU      **English level:** CET 6  
**Ranking:** 1 / 98      **Achievements:** 3.65 / 4  
**Major:** Mechanical design, Manufacturing and automation

Program C (93), Principles and Application of MCCM (93), Mechanical Engineering Testing (92), PLC (99),

## Scholarship and prize

- 2020.09-2021.06 National Scholarship (only 1 person in the school)
- 2018.09-2019.12 Zhu Yuanding Scholarship (only 1.02%)
- **2018.09-2022.06 First prize of SHOU's Scholarship of Ocean University (only 5% of the university)**
- **2020.09-2020.12 2020 National College Students Mathematical Modelling Competition Second prize Leader**
- **2020.10-2020.12 2020 "TI Cup" National College Student Electronic Design Competition Third prize Leader**
- **2021.03-2020.05 2021 Mechanical Engineering Innovation Design Competition Second prize Member**
- **2020.03-2020.08 The 15th "Freescale" Students Intelligent Car Competition Third prize Leader**
- **2019.09-2019.12 2021 Shanghai Engineering Training Ability Competition Second prize Member**
- 2020.07-2020.12 2020 3D Digital Innovation Design Competition **Second prize Leader**
- 2019.09-2019.12 2019 The National Finals of the 13th iCAN Competition **Third prize Member**
- 2021.10-2021.12 2021 "TI Cup" National College Student Electronic Design Competition **Third prize Leader**
- **2021.06-2021.09 The 7th "Internet +" College Student Competition Silver prize Member**

## Scientific research practice

- 2020.1 - 2021.3 **Intelligent logistics classification of car**
- This project solves the problem of automatic item identification and automatic path planning, and an intelligent logistics classification car is designed. Use OPENMV for the machine vision part and STM32 for the control part. A serial port is used to communicate between the two. The car uses the McNham wheel to provide a flexible way of movement, the wheat wheel is connected to the deceleration DC motor, and the drive plate of the motor uses TB6612. The 6 degree arm is driven by steering gear. The steering gear is a 16-way rudder drive of the model LX16A. The communication mode with the STM32 is a serial port. To ensure the stability of the system, the control power and power power of the whole system are independent. STM 32, OPENMV Unified 5V power supply. The DC motor is powered by a power supply of 12V, the steering gear drive voltage requirement is 3.7V, and the M2596S DC-DC DC voltage regulating module is used to stabilize the voltage to 3.7V.
- 2020.01-2021.03 **Multi-functional fruit and vegetable car**
- The municipal big project to solve the problem of flexible control and high precision control, build MDK development environment, using crawler wheel structure, by slowing dc motor to drive crawler wheel operation, carrying coder closed-loop feedback adjustment, using OPENMV of fruit and vegetable color threshold, and compared with the threshold in the library, finally with a small loss rate of mature fruit.
- 2021.1-2022.3 **Cold and cold integrated vending machine**
- To solve the problem of food heating and sales in places with high human density, Detection 10-inch LCD touch screen underpressure sensor by STM32, To complete the human-computer interaction operation, Control of the step motor drive through the MCU PWM wave to complete the drive of the stepper motor, To enable the mechanical arm carrying the DS3218 rudder machine to rotate freely in the pickup area, Goods conveyor forward, Until the infrared diffuse reflection sensor detects the cargo, Heat the food up and deliver it smoothly to the customer.