Personal Resume

Information

Name	李尧（リ・ヤオ, Li Yao）	**Gender**	男	
University	吉林大学 https://www.jlu.edu.cn/			
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Address	No.2699 Qianjin Street, Changchun City, Jilin Province, China			

Education

Jilin University (JLU), China, Bachlor's — Sept. 2019– Jun. 2023

Applied Physics — Major

Academic Experience

Major Courses

Theoretical Mechanics, Probability Theory, Probability and Mathematical Statistics, Mathematical Methods in Physics, Modern Power Electronics, Basics of Embedded Software, Principles and Applications of Sensors, Electrodynamics, C Language Programming, Engineering Drawing etc. Self-studied Courses: Principles of Computer Composition, Operating System, Computer Network, Data Structure and Algorithm, Analog Electronics, Digital Electronics, C++ etc.

On-campus Academic Programs

- Design and production of high-power PWM amplifying circuit and LC filtering circuit.
- Face mask detection based on Huawei Cloud AI.
- Graduation Thesis: Deep Learning of Ising Model (Determining Macro Temperature from Ising Model Using Deep Learning)

CS144: Introduction to Computer Networking

The project of this course progressively built the entire TCP/IP protocol stack using C++, implemented IP routing and the ARP protocol, and finally used its own protocol stack to replace the Linux Kernel's network protocol stack for communication with other computers. Currently developing the course project.

MIT6.S081: Operating System Engineering

An Operating System Engineering course based on RISC-V. Currently familiarizing myself with the course materials and preparing to commence work on related projects soon.

Project Experience

JLU RoboMaster Team | TARS_Go， Electronic Control Jul.2020-Oct.2020

RoboMaster (Chinese: 机甲大师) is an annual intercollegiate robot competition founded and hosted by the drone tech giant DJI. During my time in the lab, I've done:

- The circuit construction of the rotating target.
- C++ code design of the light response logic of rotating target.
- The speed control logic and PID optimization of the four Mecanum Wheels of the warrior robot.
- CAN bus communication between the components.

Fixed Active Noise Cancellation Device Research， Main Member Jan.2021-Jun.2022

Research on Active Noise Reduction Technology, rated as Jilin Provincial-level Innovation Project.

- Responsible for the Python implementation of the noise reduction algorithm on the upper computer, completing the visualization of the effect and the principle verification of the noise reduction perfor- mance.
- Responsible for code porting on the STM32F4 platform, development of the upper computer debug- ging interface, and completion of the model machine construction.

2021 "Internet+" Competition， Backend Engineer Apr.2021-Sep.2021

As a pioneer of a one-stop remote education experiment platform, this project provides a platform for remote operation and teaching of university physics experiments.

- Participate in the construction of the three-dimensional interactive scene in the Unity engine in the laboratory.
- Responsible for IoT integration of sensors and experimental equipment for remote access.

Jilin University LingXie Studio， Main Member Jul.2021-Jun.2022

The studio's work is mainly about embedded system design and software development. During my time in the studio, I've done:

- Electronic Design Competition Preliminary: Two-wheel Balance Car based on STM32 and Raspberry Pi.
- 2021 National College Electronic Design Competition: Track and Medicine Delivery Car based on ESP32 and OpenMV.
- Laboratory Open Source Robot Project: Six-legged Robot based on ESP32 and Raspberry Pi.
  Project address: https://github.com/JLU-Automation-Team/spider-robot/

Hardware Control based on IEC61131-3 Standard Jul.2023-Aug.2023

The project objective was to provide an IDE supporting IEC61131-3 programming languages (including Ladder Diagrams, LD; Structured Text, ST; Sequential Function Charts, SFC; Function Blocks, FB) for editing, execution, syntax checking, file reading and writing, etc. Then, based on the program written by the user, it monitors and controls the hardware's IO, axes, alarm information, etc., via NC-Link. During the project, my main tasks included:

- Encapsulated instructions for the NC platform: IO control, axis motion control, alarm control, etc.
- Learned principles of compilation, completed the development of semantic analysis code generation from structured text to C language

Development of Company-related Requirements， Software Engineer Jul.2023-Present

- Desktop software development based on Delphi
- Developing test cases utilizing C and Python

Skills

Programming Language

- C/C++ (3000+ lines)
- Python (4000+ lines)
- Delphi (8000+ lines)
- C, Java, HTML(2000+ lines)

Other Linux, Docker, LATEX

Honors and Award

- JLU CTF Cybersecurity Competition, College Level Third Prize Sep.2020
- RoboMaster 2021 Collegiate Alliance 3V3, Provincial First Prize Oct.2020
- COMAP Mathematics Modeling Competition, Successful Participant Mar.2021
- 2021 National University Student Electronic Design Competition College Excellent Award Jul.2021
- "Internet+"University Student Innovation and Entrepreneurship Competition, Bronze Award Sep.2021
- TI Cup National Undergraduate Electronics Design Contest, Successful Participant Nov.2021
- HUAWEI AI Practical Course Outstanding Student Certificate Jun.2022
- National University Mathematics Modeling Competition, Provincial Second Prize Oct.2022
- USTC LUG Hackergame 2023, Group Ranking 5/40 Oct.2023

Extracurricular Activities

Amateur Radio Oct. 2020

Callsign BH3GEI