

# Yixuan Huang

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## Education

### 3rd Year undergraduate – Electronic Information Engineering

Wuhan University of Technology

Sep. 2022 – Current

Wuhan, China

- GPA: 91.24/100
- **Coursework:** Electrical Engineering and Electronics, Analog Electronic Circuit, Digital Electronic Circuit, Microcontroller Applications

#### Selected Courses with High Grades:

- Introduction to C Programming – 98
- Computer Fundamentals & C Programming Lab – 100
- Python Programming – 97.2
- Java Programming – 95.33
- CUDA High-Performance Scientific Computing – 96
- Circuit Theory I & II – 95.6 & 97.4

## Selected Skills and Awards

**Languages:** Python, C/C++, Java, MATLAB, Assembly Language, VHDL

**Tools/Technologies:** Git, Linux, LaTeX, CUDA, PCB Design Software, Machine Learning

**Hardware:** Circuit design, soldering, microcontroller programming

**Signal Processing:** Digital filters, FFT

**Soft Skills:** communication, adaptability, detail-orientation, collaboration

- **Provincial First Prize** – China College Engineering Practice and Innovation Competition Ranked 2nd nationally in the Provincial Selection (2023)
- **University Scholarship** – Second Prize Scholarship (2023), First Prize Scholarship (2024)
- **Excellent Student** – Wuhan University of Technology Excellent Student (top 1%) (2023, 2024)

## Experience

### China College Engineering Practice and Innovation Competition – Competitions

Jun. 2023 – Oct. 2023

Provincial First Prize, Ranked 2nd Nationwide

- Led a team to design a simulated intelligent connected vehicle, capable of intelligently assessing road conditions and making driving decisions.
- Managed the overall project, ensuring smooth coordination and task delegation among team members.
- Developed and coded algorithms for vehicle decision-making in the simulation environment, optimizing for real-time performance and safety (scored 30% higher than the next team).

### Electronic Music Box – Electrical Engineering and Electronics Coursework

Oct. 2023 – Nov. 2023

- Designed and fabricated an electronic music box that mimics the appearance of a vinyl record player, featuring music and light circuits, with a fully designed PCB layout created using *Altium Designer*.
- Assembled the final product by soldering components and conducting circuit functionality testing.
- Successfully implemented a system that allows users to freely select songs for an interactive experience.

### Electronic Keyboard – Analog Electronic Circuit Coursework

Nov. 2023 – Dec. 2023

- Designed and built a simple electronic keyboard with 21 keys, each generating a corresponding tone from C3 to B5 in the Scientific Pitch Notation when pressed.
- Developed a driving circuit to control a buzzer for sound output, utilizing basic electronic components like resistors, capacitors, and transistors.

- Implemented an oscillator circuit to produce specific frequencies for each keypress, I have played multiple musical pieces using the electronic keyboard.

#### **Multi-Channel Quiz Buzzer System** – Digital Electronic Circuit Coursework

May. 2024 – Jun. 2024

- Designed and implemented an 8-channel quiz buzzer system with a countdown timer, using digital circuits, including logic gates and flip-flops.
- Built a pure hardware circuit to detect buzzer inputs and determine the number of the first participant to press their button, controlling both an LED display and seven-segment displays.
- I used this buzzer system in a classroom quiz competition.

#### **Electronic Password Lock System** – Microcontroller Applications Coursework

Nov. 2024 – Dec. 2024

- Designed and implemented an electronic password lock system using FPGA for secure access control.
- The system includes features such as password validation, error password alerts, unauthorized access alarms, and password modification, et al.
- Due to FPGA button limitations, the system can support up to  $(2^8)^4$  password combinations. This system was integrated into an electronic music box to ensure that the playback content cannot be modified without correct access.

### **Extracurricular Activities**

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#### **Student Union Officer** – Wuhan University of Technology

Sep. 2022 – Jun.2024

- Organized and coordinated multiple school-wide and department-level meetings, ensuring smooth communication and event execution.
- Assisted in the planning and logistics of the annual sports meet, including coordination of volunteers and event schedules.
- Led a team of students to manage event setups, troubleshoot on-site issues, and facilitate participant engagement during events.

### **Objective**

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I am a motivated undergraduate student majoring in Electronic Information Engineering at Wuhan University of Technology, seeking remote research opportunities in robotics, HRI, and AI-driven technologies. I aim to leverage my expertise in programming, and algorithm development to contribute to innovative projects at the intersection of robotics control and practical problem-solving while expanding my knowledge and experience in cutting-edge research.