Hankun Xu

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Education

Sixian Mlddie School, Zhengzhou, China **2015.9 - 2018.6**
Zhengzhou Experimental High School, Zhengzhou, China **2018.9 - 2021.6**
Huzhou University, Huzhou, China **2021.9 - 2025.6**

- Major: Electronic Information Engineering
- GPA: 4.00/5
- Core courses: Digital Logic Circuits (92), Analog Electronic Technology (90), Electromagnetic Fields and Waves (85), Principles of Automatic Control (92), Communication Circuits (90), Advanced Language Programming (92), Circuit Analysis (86), Digital Signal Processing (86)

Awards

Scholarship

- 2021-2022 First class scholarship of the school
- 2022-2023 School Special Scholarship

Subject competition

- 2022 **TI Cup** National Undergraduate Electronic Design Contest **Provincial Third Prize (TOP 40%)**
- 2023 **TI Cup** National Undergraduate Electronic Design Contest **National Second Prize (TOP 8%)**
- 2024 **Renesas Cup** National College Student Electronic Design Contest Information Technology Frontier Special Contest **Provincial First Prize**

Research

- Machine vision
- Automatic control system
- Embedded system design
- Digital/analog circuit design
- Front-end/back-end development
- Internet of Things system development

Project

- Moving target control and automatic tracking system (2023.8) Advisor:Lili Yao
  - A two-dimensional platform built using NVIDIA Jetson platform, OpenCV computer vision library, and brushless motors to achieve real-time detection, tracking, and control of moving targets.
- High-throughput phenotyping system for potted plants (2024.4) Advisor:Xiangxiang Fan
  - A two-dimensional rotating platform using stepper motors and a single-point laser ranging module for 3D modeling of plants, analyzing plant growth through spectral analysis, and displaying data on a web page developed using the Vue framework.
- Car following driving system (2022.7) Advisor:Xiangxiang Fan

  - Line tracking through infrared sensors, distance monitoring through UWB modules, data exchange through wireless serial communication modules, and distance control through a PID algorithm.

- Non-contact object size and shape measurement (2023.5) Advisor:Xiangxiang Fan
  - Analyzing the shape and pixel length of graphic edges through a camera, calculating geometric parameters after obtaining the distance through a 2D pan-tilt and laser ranging.
- Brushless motor drive circuit and FOC control algorithm design (2023.4)
  - Designing a three-phase full-bridge drive circuit for brushless motors and controlling it using the FOC algorithm.

Skill

Programming Language:

C, Python, C++, JavaScript, Verilog, MATLAB, Lua

Software:

Keil, STM32CubeMX, LCEDA, Altium Designer, SolidWorks, LabVIEW, Multisim, Visual Studio Code, Git, Markdown, LaTeX, Anaconda, Xshell, Xftp, Quartus II

Language:

TOEIC 690