

# zhuwenq

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## EDUCATION EXPERIENCE

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2021 - present Master Candidate at **NUAA** major in *Computer Science and Technology*. (GPA:)  
2017 - 2021 Bachelor's Degree at **NUAA** major in *Optoelectronic Information Science and Engineering*. (GPA: 3.2/5.0)

## PROJECT EXPERIENCE

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**A Measuring System of Metal Surface Flatness Based on Electromagnetic Induction Principle** as *Creator and maintainer*. Sept. 2018 - Nov. 2018

- We designed a tiny PCB coil as an electromagnetic sensor and power it with a dedicated IC.
- The dedicated chip collect the electromagnetic impedance value between the coil sensor and the surface of the object to be tested, and encode the value into digital data.
- Also note this system is implemented with a 2-axis moving platform powered by G-code thus it is able to scan a surface automatically.

**OpenChart** as *Creator and maintainer*. Jun. 2019 - Dec. 2019

- This is a personal project for charts making from data cheats, the aim of this project is to learn the programing pattern of Qt.
- In this project, I designed a Web-based chart visualization page for charts rendering (ECharts is used to make charts), and a QWebEngine is utilized to load the page and execute the scripts.
- For data transferring between the Qt/C++ end and the HTML/javascript end, I setted a socket server with QWebSocketServer at the Qt/C++ end and built a brige with QWebChannel to establish a connection.

**An embedded system for smart trash bin** as *Creator and maintainer*. Dec. 2020 - May 2021

- I designed both the hardware and the software of an embedded system for a smart trash bin.
- For the hardware part, I designed a core board for STM32F103RET6 MCU and a driver board for over 6 sensors and 1 executor as well as the MODBUS interface for data transferring.
- For the software part, I adapted a MODBUS slave protocol stack implementation to the MCU platform as the communication interface for interaction between MCUs and between MCU and PC, and I implemented all the drivers for the sensors and executor based on the STM32 HAL code base.

## INTERNSHIP

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**Nanjing Xunxing Electronic Technology Co., Ltd.** Jun. 2020 - Aug. 2020

- Participate in the development of embedded Linux software for the physical experiment equipment (a thermodynamic parameter tester).
- I developed the drive and interaction software for the embedded equipment with the Qt framework.

## SKILLS

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- Modern C++, Python, Qt and embedded systems.
- Theoretical basis of computer science, including operating system, networking, the underlying principles of computers and a good foundation of algorithms and data structures.
- Possess good documentation and engineering practice habits, and are willing to cooperate, communicate and discuss with others.