zhuwenq

Leonezz | Blog | zhuwenqa@outlook.com | +86 18551713651 | Software Engineer

Education Experience

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

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 in this project as the electromagnetic sensor and power this sensor with a dedicated chip.
- 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

- In this project, 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. To summarize, 5 U(S)ART and 1 ADC of the MCU are utilized.
- 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.

Skills

- C++ programing language, Qt, and modern C++.
- Deep learning and NLP, transformer models especially.
- Python programing language and pytorch, tensorflow, jax, pandas, matplotlib, et.al.
- Master the theoretical basis of computers, 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.