CHENGXIANG QI

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EDUCATION

TianJin Univeristy, TianJin, China   08/2019 – 07/2023(Expected)

Computer Science and Technology, GPA: 3.361/4

SELECTED OPEN-SOURCE PROJECTS

xv6-rust: Re-implement and optimize MIT xv6-riscv in Rust(**45** stars)   03/2021 – 08/2021

- Optimize memory module using Buddy System
- Redesign SpinLock/SleepLock to be used as a smart pointer, realizing RAII in a true sense
- Optimized the file system, especially supporting Rust features in the implementation of inode and Buffer

rCore-fat: rCore-Tutorial-v3 With FAT32 File System   07/2021 - 08/2021

- Implement FAT32 crate in alloc environment
- Re-design syscall for rCore-fat

SimpleMIPS: A simple 5 stage pipeline mips cpu   10/2021 - 12/2021

- Support 57 mips Instructions.
- Support SRAM and AXI bus.
- Enable in GENESYS2 FPGA.

Trivial-TCP: TCP/IP Stack based UDP written by C   09/2021 - 10/2021

- Realize TCP standards such as **connection management/reliable transmission/flow control/congestion control**

NEMU: a x86-32 emulator written in C   09/2020 - 01/2021

- Debugger
- Decode, Execute Instructions
- Segmentation, paging, secondary cache

EXPERIENCE

TianJin University   TianJin

Teaching Assignment   09/2021 – 11/2021

- Practice Of ICS in 2021

TWT Studio   TianJin

Software Enginer   09/2019 – 01/2021

- Develop The Platform Of School Affiars
- Maintain The Platform Of Party

SELECTED AWARDS

- **Operating System Competition in 2021   Three Prize in Team Competition**
- **Summer2021   The Best Quality Award(only 5)**

SKILLS

Programming Languages: Rust, C, Go, Python, C++, Systemverilog/Verilog, PHP, JavaScript, HTML/CSS (ranked by proficiency)

Tools and Frameworks: Git, GNU Make, CMake, QEMU, Vivado, VSCode

OTHERS

- Self-taught CMU 15-445, MIT 6.S081 and many other foreign public courses and finish lab assignments.
- Interested in OS, Computer Architecture, Distributed Systems.
- Participated in the development of rcore-os, cs-self-learning and other open source communities.
- Personal open source projects have accumulated more than 100 stars.