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

xv6-riscv-solution: x86-32 Virtual Machine written by C 09/2020 - 01/2021

- I finished some lab assignments in this course by self-taught.

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 07/2021 - 08/2021

- 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

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.
- Interested in OS, Computer Architecture, Distributed Systems.
- Participated in the development of rcore-os, cs-self-learning and other open source communities.