Ben Chen

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🎓 Education

Southern University of Science and Technology Shenzhen, China   2022 – Present
Undergraduate in Computer Science and Technology (BEng), expected June 2026

National University of Singapore Singapore   Jun. 2024 – Jul. 2024
Visiting Student in School of Computing

👥 Experience

MineCPU   Mar. 2024 – May. 2024

SystemVerilog, Verilator, FPGA   Designer & Developer

RISC-V CPU designed for FPGA implementation, Course Project of CS202 Computer Organization
Link: `https://github.com/wLUOw/SUSTech_CS202_MineCPU`

- Implemented standard 5-Stage Pipeline, 32-bit RISC-V ISA RV32IM, L1 Cache in direct-mapped and write-back strategy, Branch Prediction using BHT & RAS
- Optimized CPI to 1.02
- Verification using UVM (Verilator) and FPGA (Xilinx)

HTTP File Manager   Nov. 2023 – Dec. 2023

Python, Javascript, HTML   Developer

HTTP file manager with frontend and backend designed independently, and HTTP protocol communication implemented from scratch, Course Project of CS305 Computer Networks
Link: `https://github.com/chanbengz/CS305_Project_2023F`

- Implemented Multi-threading HTTP server with Python builtin library only
- Implemented all file operations (upload, download, delete, rename, etc.)
- Implemented authentication and encryption, data storage using SQLite
- Optimized request handling and memory usage, fast response time

Introduction to Computer Programming Course (CS109)   Feb. 2023 – Jun. 2023

Java   Student Assistant

Assisted professor in teaching, grading, and answering questions from students for the course CS109 Intro to Java Programming, taught in English, Spring Semester of 2023.
Link: `https://fengweiz.github.io/23sp-cs109/index.html`

- Made slides (in $\LaTeX$) for labs, and give instructions to students.
- Designed programming assignments, and generating test cases in Java & Python.
- Composed documents and instructions manual distributed to students in Typst and Markdown.
- Graded assignments and exams, and gave feedback to students.

⚙ Skills

- Programming Languages: C/C++ == Python > SystemVerilog > Java
- Platform: Linux, macOS
- Development: Security Research, Penetration Test, Architecture Design, Web/Software Engineering

♡ Honors and Awards

3rd Prize, 17th CISCN, Division of Southern China   Jun. 2024
3rd Prize, 3rd College Cybersecurity Contest of Guangdong Province   Jun. 2024
Medium Severity, EDUSRC Vulnerability Report   May, 2024

3rd Prize, CUMCM 2023, Guangdong Province   Jun. 2023
2nd Place, COMPASS CTF 2022   Dec. 2022

ⓘ Miscellaneous

- Blog: `https://chanbengz.github.io`
- GitHub: `https://github.com/chanbengz`
- Languages: English - Fluent, Mandarin - Native speaker