Shen Fu

Education

2020 – 2024 B.S. in Computer Science and Technology, University of Science and Technology of (expected) China, China

- O School of the Gifted Young
- O Major GPA: 4.04/4.30, Cumulative GPA: 3.90/4.30, Rank: 22/269
- O Relevant coursework:
 - Compiler (96)
 - Operating System (90)
 - Computer Organization (91)
 - Algorithm (94)
 - Data Structure (92)

Projects

Jan 2023 CminusF Compiler, Compiler for C-Minus-F (subset of C)

- O Utilized a simplified version of LLVM IR called LightIR.
- O Implemented the front-end parser, the IR generation and some optimizations.
- Implemented a GVN analysis to eliminate redundant code and propagate constant values.
- O Generated machine code via LLVM's backend.

May 2022 RISC-V Sub, Self-Designed CPU Core

- Implemented a 32-bit RISC-V ISA CPU core with 5-stage pipeline and 2-bit dynamic branch prediction in Verilog.
- \circ Supported a subset of RV32I instructions, including arithmetic, logical, memory, and control instructions.
- Demonstrated the design by running on FPGA.
- O Developed and integrated the core with a Processor Debug Unit (PDU) independently.

Awards and Scholarships

Jan 2023 Jianghuai & NIO Automobile Scholarship

Jan 2022 Chen Linyi Scholarship

Dec 2020 Outstanding Freshman Scholarship (Grade 2)

Skills

Programming Languages

Skilled C/C++, Python, Verilog, Markdown, LATEX

Familiar Lua, Shell Script

Tools and Operating Systems

Experienced Git, Vim, Docker

Familiar Linux, Windows

Languages

Native Mandarin Chinese

Fluent English