

Shen Fu

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Education

- 2020 – 2024 (expected) **B.E. in Computer Science and Technology**, *University of Science and Technology of China*, China
- School of the Gifted Young
 - **Major GPA: 4.04/4.30**, Cumulative GPA: 3.90/4.30, Rank: 24/262
 - Relevant coursework:
 - Data Structure (92)
 - Operating System (90)
 - Computer Organization (91)
 - Algorithm (94)
 - Compiler (96)

Projects

- May 2022 **RISC-V Sub**, *Self-Designed CPU Core*
- A 32-bit RISC-V ISA CPU core with 5-stage pipeline and 2-bit dynamic branch prediction, implemented in Verilog.
 - Supports a subset of RV32I instructions, including arithmetic, logical, memory, and control instructions.
 - Successfully demonstrated the design by running on FPGA.
 - Independently developed and integrated the core with a Processor Debug Unit (PDU).
- Jan 2023 **CminusF Compiler**, *Compiler for C-Minus-F (subset of C)*
- Utilized a simplified version of LLVM IR called LightIR.
 - Implemented the front-end parser, the IR generation and some optimizations.
 - Implemented a GVN analysis to eliminate redundant code and propagate constant values.
 - Generated machine code via LLVM's backend.

Awards and Scholarships

- Dec 2020 Outstanding Freshman Scholarship (Grade 2)
- Jan 2022 Chen Linyi Scholarship
- Jan 2023 Jianghuai & NIO Automobile Scholarship

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