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