

# 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: 4.05/4.30**, Cumulative GPA: 3.89/4.30, Rank: 24/262
  - Relevant coursework:
    - Data Structure
    - Operating System
    - Computer Organization
    - Algorithm
    - Computer Network
    - Compiler

## Awards and Scholarships

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

## 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.

## Skills

### Programming Languages

- Proficient C/C++, Python, Verilog  
Skilled Markdown,  $\text{\LaTeX}$   
Familiar Lua, Shell Script

### Tools and Operating Systems

- Experienced Git, Vim, Docker  
Familiar Linux, Windows

### Languages

- Native Mandarin Chinese  
Fluent English