

# CHEN Zi Hang

Nanjing University of Science and Technology

+86 18951851961 | [chenzihang@njust.edu.cn](mailto:chenzihang@njust.edu.cn) | [github.com/maxkev1n](https://github.com/maxkev1n)

## Personal Profile

An undergraduate student at school of computer engineering, Nanjing University of Science and Technology, undertaking the computer architecture and computer system. Zealous about computer architecture and with 7+ months of experience specialising in GEM5, NEMU(Nanjing university emulator), Xiangshan processor, and Verilog development. Primarily, looking for Computer Science master program.

## Education

### Nanjing University of Science and Technology

Nanjing, China

B.S. in Computer Science and Technology (expected)

Sept 2019 - Current

- Leader of the school team of NSCSCC(National Student Computer System Capability Challenge) 2021
- Leader of a school research project about *pipeline RISC-V processor*
- Working as a teaching assistant for MIPS CPU Design in autumn 2021 and autumn 2022

## Work Experience

### Institute of Computing Technology, Chinese Academy of Sciences

Research Assistant

March 2022 - May 2021

- Received a comprehensive and general training on computer architecture and computer system.
- Learned basic operations on GEM5(a sophisticated system simulator), including configure a out of order processor, run benchmarks and workloads, measure more useful metrics
- Add some functions to the NEMU(Nanjing university Emulator), exploit NEMU to generate some workloads and checkpoints, run RISC-V version of Linux on NEMU
- **Technical Skills:** GEM5, NEMU, QEMU, Python, C++, C, Ubuntu Linux, Linux tools, Git, Bash.

### Beijing Institute of Open Source Chip

Intern

June 2022 - Current

- Tested simpoint profiling on NEMU and generated checkpoints of special workloads.
- collaborated to implement two outstanding functions called *diffest* and *GCPT restorer* on GEM5.
- explored a new technique called *speculative renaming* on GEM5
- collaborated to implement a new microarchitecture called *decoupled frontend* on GEM5, which is combined with a *loop detector*, a *TAGE predictor* and a *next stream predictor*
- **Technical Skills:** GEM5, NEMU, C++, C, Python, Ubuntu Linux, Git, Zsh.

### Nanjing University of Science and Technology

Teaching Assistant

November 2021 & August 2022

- Taught a courser called MIPS CPU design that students need to design their own MIPS processor.
- prepared teaching materials including slides and guidelines
- solved students' related problems
- checked students' lab's results and projects

## Skills

**Programming** C/C++, Java, Python (NumPy, matplotlib etc.), HTML/CSS, SQL, Verilog.

**Miscellaneous** Ubuntu Linux, Shell (Bash/Zsh),  $\LaTeX$ , Markdown, Microsoft Office, Git, Vivado, GEM5.

## Interests

<b>Linux</b>	I'd like to explore and try different operating system, such as different versions of Linux.
<b>Technical Writing</b>	I write some articles about my researches and works, write down some notes and impressions about some famous or fantastic papers and upload them on my social media.
<b>Workshops</b>	I enjoy communicating with other researches and exchanging our experiences or ideas, so I actively participate the workshops or conference organised by my company or other institutes.

## Languages

**English** Professional proficiency

**Chinese** Native proficiency