

陈昱宁 (YuNing Chen)

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Education

- **South China Normal University**

2021/09 – 2025/06

Network Engineering

- The only undergraduate **Teaching Assistant** for Operating System Project Class (Fall 2023): Assisted in answering questions and improving the project documentation (adapted from MIT 6.S081 Lab).

Skills

- **Core Skills**

- **Low-Level Programming:** Possess comprehensive understanding of both hardware and software, capable of writing CPU-friendly, cache-efficiency, SIMD code.
- **Functional Programming:** Confident in working with common paradigms such as FP, OOP and Imperative Programming.
- **Algorithms and Data Structures:** Proficient in analyzing time and space complexity, experienced with key algorithms and data structures, and skilled in writing optimized code.
- **Self Learning Ability:** Proficient in Googling, asking and answering questions. Possess a fast learning pace.
- **Programming Languages:** Learnt quite a few programming language with experiences in PLT topics. Proficient in C/CPP, TS/JS, Go, OCaml, Rust, Assembly...

- **Soft Skills:**

- Testing, Logging, Profiling, Debugging, Abstracting and Collaborating
- Experienced with Git/GitHub workflow (Rebase, Cherry-Pick, etc.) and Conventional Commit.
- Proficient in English (CET6 577), with extensive reading of English books, papers, docs and blogs.
- Mastered Linux usage, configuration, and management. Skilled in container management with Docker.

Projects

- SysY Compiler

- A SysY compiler written in Rust that compiles SysY language (subset of C) to RISC-V assembly, passing all public test cases provided-by Peking University. Made it to the final of the National Compiler Competition.

- MoonBit Standard Library

- The standard library for the MoonBit programming language, improved various data structures and algorithms and overall performances.

- Telegram Bot for Memos

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- A Telegram Bot for the [memos project](#), recommended by the project. Also contributed to the [memos project](#).

- More Contributions on GitHub...

- Numerous course projects that aren't suitable for public access on GitHub, including but not limited to:

- CMU 15-213 CS:APP Labs
- CMU 15-445 Database Labs (Bustub)
- MIT 6.S081 OS Labs (XV6)
- MIT 6.824 Distributed Systems Labs (Raft)
- Stanford CS144 Networking Labs (TCP Implementation)

Experiences

- **MoonBit Programming Language Developer Intern**

2024/05 – 2024/11

@ [International Digital Economy Academy](#)

- Improved the standard library for MoonBit, including pseudo random number generation, hash optimization, Iter implementation, Unicode Conversion, Json Parsing, Float to String, etc.
- Enhanced the MoonBit compiler with features such as ConstFolding, AST based Trait Deriver(automatic codegen), new syntaxes, Formatter and DocGen enhancement, Protobuf parsing, etc.

- Overall performance improved by 4%, with 10x performance increase in specific cases. In most cases, the output file size decreased by 30%. The new syntaxes were widely used in the standard library and the competition held by MoonBit, gaining user recognition.

- **Turing Class, SCNU**

2021/09 – Now

A self-motivated, unofficial discussion group covering topics like Mathematics (MIT 18.06, 18.01, 18.02), Algorithms and Data Structures (CLRS), Operating Systems (CSAPP, OSTEP), Theory of Computing (MIT 18.404), etc.

- As an active member, organized multiple discussions and delivered several presentations.
- Mentored freshmen in Linear Algebra, C programming, and CS 61A, enabled them ask high-quality questions.