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 code.
- Algorithms and Data Structures: Mastered the time and spatial complexity, skilled in writing efficient code.
- Functional Programming: Confident in working with common paradigms such as FP, OOP and Imperative Programming.
- Self Learning Ability: Proficient in Googling, asking and answering questions. Possess a fast learning pace.

· 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, docs and blogs.
- ▶ Mastered Linux usage, configuration, and management. Skilled in container management with Docker.

• Languages and Libraries (including but not limited to):

- ► Languages: C/C++, TS/JS, Go, OCaml, Rust, Assembly...
- ► Databases: SQLite, PostgreSQL, MySQL, MongoDB...
- Libraries:
 - Golang: gorm, gin, zap...
 - C++: CMake, GoogleTest, GoogleBenchmark, nlohmann/json...

Projects

• Telegram Bot for Memos 112

► A Telegram Bot for the memos project, widely used, and also contributed to the memos project itself.

Search Obsidian in Google

• A combination of an Obsidian plugin and browser extension used to search Obsidian notes on Google.

• SysY Compiler

- A SysY compiler written in Rust that compiles SysY language to RISC-V assembly, passing all public test cases provided by Peking University.
- MoonBit Standard Library
 - The standard library for the MoonBit programming language, contributed various data structures and algorithms.
- 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)
 - ► Stanford CS144 Networking Labs (TCP Implementation)

Experieces

• MoonBit Programming Language Developer Intern

2024/05 - Now

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Responsible for the development of the MoonBit programming language.

- Improved the standard library for MoonBit, including high-quality random number generation, hash optimization, Iter implementation, Unicode Convertion, Json Parsing, etc.
- Enhanced the MoonBit compiler with features such as ConstFolding, BitwiseOp, IterRangeOp, and Intrinsic additions and fixes.

• <u>Turing Class, SCNU</u> 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.