

SITE FAN

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Education

Southern University of Science and Technology

B.Eng. of Computer Science and Technology
Honored Degree, Turing Class

Sep. 2021 – Expected June 2025

GPA: 3.92/4.00, Major Ranking: 5/195
Class Ranking: 1/29

Research Interest

Distributed Systems, High Performance Computing, Networks, Machine Learning

Researches and Projects

GPU-based Parallel Subgraph Counting and Listing over Evolving Graphs

Aug. 2024 - Present

- Implement subgraph counting and listing algorithms for dynamic graphs on GPU, leveraging GPMA/LPMA.
- Improve performance by optimizing parallel execution. Undergraduate research project advised by Prof. Zhuozhao Li.

Research Intern at OrderLab, University of Michigan

Mar. 2024 - Present

- Developing LiteSys, a fault-tolerant distributed system to enhance reliability and availability towards metastability.
- Ongoing research project advised by Prof. Ryan Huang, cooperating with OrderLab.

Stack Unwinding Implementation for Rust-based OS

Sep. 2023 - Jan. 2024

- <https://github.com/asterinas/asterinas>
- Designed and implemented stack unwinding using the DWARF standard for Rust-based OS Asterinas. Facilitated kernel debugging capabilities, improving system diagnostics.
- Undergraduate research internship and group project advised by Prof. YinQian Zhang, cooperating with Asterinas.

SPL Compiler

Sep. 2023 - Jan. 2024

- https://github.com/GuTaoZi/SPL_Compiler
- A C-based compiling tool including lexical, syntax, semantic analyzer and intermediate code generator to compile a custom C-like language into MIPS32 Code.
- Semester group project of the Compilers course.

GAS File System

May 2023 - June 2023

- https://github.com/GuTaoZi/GAS_FileSystem
- A custom Linux file system implemented as a kernel module, supporting basic file operations and VFS interfaces.
- Inspired by samplefs, group project of Operating System(H) cooperating with two students from Turing Class(100/100).

Feather CPU: Single-Cycle RV32I CPU Design on Minisys

Apr. 2023 - June 2023

- <https://github.com/GuTaoZi/FeatherCPU>
- A lightweight CPU core design running on Minisys, supporting basic RV32I instructions and several IO devices.
- Implemented with reference to *Computer Organization and Design: The Hardware/Software Interface*. Group project of Computer Architecture(H) in collaboration with another student from Turing Class(130/100).

Languages and Skills

Languages: Chinese Mandarin (native), English (TOEFL 103, R30—L29—S22—W22)

Programming Languages: C/Cpp, Python, Verilog, Rust, Java, JavaScript, HTML, MIPS/RISC-V Assembly, SQL

Relevant Coursework

Course Name	Score	Letter Grade
Operating Systems(H)	100	A+
Computer Organization and Architecture(H)	100	A+
Machine Learning(H)	99	A+
Data Structure and Algorithm Analysis (H)	96	A
Algorithm Design and Analysis (H)	95	A
Digital Logic(H)	94	A
Artificial Intelligence(H)	93	A
Principles of Database Systems (H)	92	A-
Computer Networks	90	A-

* The Courses with (H) are honorable courses for Turing Class.

Awards and Scholarships

First Prize for Outstanding Student Scholarship, SUSTech	2024
National Scholarship (9 out of 4000)	2023
Special Prize, School Motto <i>Truth</i> Series Scholarship, SUSTech (3 out of 4000)	2023
First Prize for Outstanding Student Scholarship, SUSTech	2023
Successful Participant Award, International Mathematical Contest In Modeling	2022
Provincial third Prize, Chinese Mathematical Contest in Modeling	2022
First Prize for Outstanding Student Scholarship, SUSTech	2022
Outstanding Freshman Scholarship, SUSTech	2021

Position of Responsibility

Teaching Assistant of Advanced Computer Program Design	Sep. 2024 - Jan. 2025
Teaching Assistant of C/C++ Program Design	Sep. 2023 - Jan. 2024
Monitor of 2021 Turing Class	Aug. 2022 - Present
Peer Mentor of Shude College	May. 2022 - Present