

# Yifei YANG

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## Education

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<b>Sun Yat-sen University</b>	Master of Engineering
Computer Science and Technology	2024.09 -- 2027.06(Expected)
<b>Sun Yat-sen University</b>	Bachelor of Engineering
Software Engineering	2021.09 -- 2024.06
<b>Sun Yat-sen University</b>	Studied
Remote Sensing Science and Technology	2020.09 -- 2021.07

## Selected Projects

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<b>Application Environment for Heterogeneous Supercomputing Systems</b>	Computer Architecture
National Key Research and Development Program of China	2023.12 -- 2026.11(Expected)

- **Description:** For the new generation of supercomputing systems, based on the highly heterogeneous nature of supercomputer architecture, to develop application support and development framework software platforms to support ultra large-scale parallel computing, so as to provide a supporting environment for the diverse applications of supercomputing, which can be adapted to a variety of hardware with different architectures for efficient development and transplantation.
- **Contribution:** As a core member of the project's large-scale multi-application parallel support environment team, I am primarily responsible for adapting the software and hardware environments of domestic supercomputing systems.

<b>Efficient Scheduler for POSIX Compliant and SMP Systems for NuttX RTOS</b>	Operating System
National Computer System Development Capability Competition of China	2023.03 -- 2023.08

- **Description:** Based on the open-source real-time operating system NuttX, we implemented a symmetric and efficient scheduler where each core maintains its own scheduling sequence using the existing kthread and semaphore support for NuttX's SMP support, and tested it in the simulation environment and on the Sony Spresense real machine, respectively.
- **Contribution:** As the main contributor to the project, I was primarily responsible for algorithm design and implementation, real machine platform verification, project report writing and defense.
- **Achievement:** Won the second prize in the 2023 National Computer System Development Capability Competition, the Operating System Design Competition Functional Challenge Track in the National Finals, the Outstanding Award in the Southern Region Competition, and the team's instructor also won the Outstanding Instructor Award.

## Multi-modal Long Content Misinformation Detection Based on Deep Learning

Deep Learning

Sun Yat-sen University School-level Project

2021.11 -- 2022.11

- **Description:** For Chinese multimodal long content information, we constructed a Chinese multimodal long content misinformation dataset; meanwhile, we proposed a deep learning model based on attention mechanism to detect the authenticity of Chinese multimodal long content information of “image + text”.
- **Contribution:** As the project leader and first finisher, I coordinated the team plan, literature research, algorithm design and some experiments, and completed the final report writing and project defense.
- **Achievement:** Acceptance of the program with a grade of “Excellent” (1/12 for school-level projects).

## Experience

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### Network and Information Center • Sun Yat-sen University

Student Assistant

Zhuhai Campus

2021.11 -- 2024.06

- **Description:** Participate in the maintenance of the school’s network and information services, and help troubleshoot technical problems on the campus network.

## Competitions and Awards

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- **Professional Competitions:** 2023 National Computer System Development Capability Competition, Operating System Design Competition Functional Challenge Track National Finals Second Prize, Southern Region Competition Outstanding Award, participated in the Oceanbase Database Competition;
- **Programming Competitions:** 300 points in the CSP C/C++ group of the 30th CCF (top 2.26% nationwide); invited to participate in the Huawei 2023 Hackathon Software Challenge Competition;
- **Mathematical Modeling Competition:** MCM Finalist, 2023;
- **Scholarship:** Sun Yat-sen University-MUCFC Scholarship, First Prize of Sun Yat-sen University Scholarship for Outstanding Students;
- **Other Administrative Awards:** Sun Yat-sen University Outstanding Student Assistant, 2023 & 2024.

## Skills and Interests

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- **Programming Languages:** Proficient in C/C++; familiar with Rust, Python; have experience in Java, SQL, Matlab, TypeScript and some other languages.
- **Development Tools:** Familiar with Linux common distributions and maintenance, have experience in using and developing multiple supercomputers including Tianhe and Sunway series, familiar with POSIX programming interface, proficient in using git, gdb, Docker, LaTeX, Legion, MySQL/MariaDB; have experience of Typst, LLVM, Kokkos and some other technologies and projects.
- **Interests:** High Performance Computing, Distributed System, Backend Development, Open Source Community Participation and Project Maintenance.
- **OSS Contribution:** Participated in multiple open source projects. Fixed the GLibcxx version detection problem for VSCode.