Yifei YANG

https://yfyang.me/ • NorthSecond • contact@yfyang.me • yangyf83

Education

Sun Yat-sen University — Master of Engineering
Computer Science and Technology — 2024.09 -- 2027.06(Expected)

Sun Yat-sen University — Bachelor of Engineering
Software Engineering — 2021.09 -- 2024.06

Sun Yat-sen University — Studied
Remote Sensing Science and Technology — 2020.09 -- 2021.07

Publications

- [PDCAT 2024] **Yifei Yang**, Tianyufei Zhou, Linchang Xiao, Chengrun Yang, Xuezheng Liu, Miao Hu, Di Wu. "NAAM: Enhancing Automatic Task Mapping Efficiency on NUMA Machines"
- [HPSC 2025] **Yifei Yang**, Linchang Xiao, Tianyufei Zhou, Chengrun Yang, Xuezheng Liu and Miao Hu. "DRL-MOSHRS: A Deep Reinforcement Learning Approach for Multi-Objective Scheduling in Heterogeneous HPC Systems"
- [HPSC 2025 | **Best Paper**] Tianyufei Zhou, **Yifei Yang**, Chengrun Yang, Linchang Xiao, Xuezheng Liu and Miao Hu. "TaskFlare: A Heterogeneity-aware Unified Scheduling Framework for Diverse Domain-Specific Applications in Supercomputing Environments"

Selected Projects

Application Support Environment and Development Framework for Large-Scale Heterogeneous Distributed Systems — High-Performance Computing
Dec 2023 -- Dec 2026 (Expected)

- **Project Overview**: Designed and implemented an application support environment and development framework for heterogeneous multi-core supercomputers. Supported diverse applications including large-scale AI, parallel scientific computing, and distributed graph processing.
- **Responsibilities**: Core member responsible for hardware/software adaptation, scheduling algorithm design, and runtime system implementation.Led performance optimization and testing for specific modules.

Efficient SMP Task Scheduler Based on NuttX RTOS — Operating Systems
2023 National College Student System Capability Competition · OS Challenge Track — Mar 2023 -- Aug 2023

- **Project Overview**: Developed a POSIX-compliant symmetric multiprocessing (SMP) two-level scheduler based on Apache NuttX.Resolved single-core task queue bottlenecks, significantly improving scheduling efficiency.
- **Responsibilities**: Led algorithm design, platform verification, and project presentation.
  Conducted experiments across multiple architectures.
- **Achievements**: Awarded Second Prize in National Finals and Outstanding Regional Award; Mentor recognized as Excellent Instructor.

DNN-Based Multimodal Long-Content Misinformation Detection Method — Deep Learning
Innovation Project at Sun Yat-sen University — Nov 2021 -- Nov 2022

- **Project Overview**: Built the first Chinese multimodal misinformation dataset and proposed an attention-based deep learning model. Achieved leading results on benchmark datasets domestically.
- **Responsibilities**: Coordinated team planning, literature review, algorithm design, and experiments. Wrote final reports and presented findings.
- **Achievements**: Received Excellent Evaluation (1/12 among university-level projects).

Experience

Sun Yat-sen University · Network and Information Center Student Assistant

Zhuhai Campus, Sun Yat-sen University Nov 2021 -- Jul 2024

- **Responsibilities**: Provided technical support and troubleshooting for campus networks and IT services. Assisted in maintaining school IT infrastructure and user consultations.

Sun Yat-sen University · School of Computer Science Teaching Assistant

First Semester 2024-2025 · Parallel Computer Architecture Course Sep 2024 -- Jan 2025

- **Responsibilities**: Redesigned course experiments incorporating modern architecture concepts. Guided students through labs, answered questions, and graded assignments, receiving positive feedback.

Competitions and Awards

- **Technical Competitions**: Second Prize in National Finals and Outstanding Regional Award in 2023 National College Student System Capability Competition. Participant in the Second Oceanbase Database Challenge.
- **Programming Contests**: Scored 300 points in the 30th CCF CSP Certification (Top 2.26% nationally). Invited to participate in Huawei's 2023 Hackathon Software Challenge;
- **Math Modeling Competitions**: Finalist Award in the 2023 Mathematical Contest in Modeling (MCM);
- **Scholarships**: Sun Yat-sen University-MUCFC Scholarship, First Prize of Sun Yat-sen University Scholarship for Outstanding Students;
- **Other Honors**: Outstanding Youth League Secretary of Sun Yat-sen University (2021), Advanced Individual in Work-Study Programs (2023, 2024).

Professional Skills

- **Programming Languages**: Proficient in C/C++, familiar with Rust and Python; experienced with TypeScript and MATLAB.
- **Technical Frameworks**: Skilled in Linux system administration and heterogeneous supercomputer cluster development, proficient in Git, Docker, LaTeX, MySQL/MariaDB, etc, and familiar with TVM, LLVM, GDB, Actix-web, and other frameworks.
- **Knowledge Areas**: Operating Systems, High-Performance Computing, Distributed Systems, Computer Architecture, Backend Development, Open Source Contributions.
- **Open Source Contributions**: Fixed a GLibcxx version detection bug in VSCode v1.85 for Linux, merged into the main branch.
- **Language Proficiency**: CET-6 Score: 536, proficient in English reading and writing.