Yijia Ma

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EDUCATION

Shanghai Jiao Tong University   Sep. 2023 - present

B.S. in Computer Science, ACM Honors Class

- **GPA:** 3.91/4.3 (Rank: #8/27)
- **Selected Courses:**
    - Abstract Algebra: 100/100
    - Linear Algebra: 98/100
    - Introduction to Cryptography: 95/100
    - Computer Networking: 98/100
    - Algorithm Design and Analysis: 95/100
    - Computer Architecture: 93/100

Shanghai High School   Sep. 2020 - Jun. 2023

Fudan University Mentorship Program

RESEARCH INTEREST

My research interests lie in **computer security**, with a particular focus on **secure systems** and **secure computation**. I am broadly interested in the **architectures, protocols, and cryptographic foundations** that ensure confidentiality and integrity. I am currently exploring methods for achieving privacy and integrity, including **Trusted Execution Environments (TEEs)**, cryptographic techniques, oblivious architectures, and I am also interested in identifying and analyzing potential **vulnerabilities and exploitations** in such systems.

RESEARCH EXPERIENCE

Network Security and Privacy Protection(NSEC) Lab, SJTU   Jun. 2025 - present

Under the supervision of Prof. Guoxing Chen at SJTU, I have been conducting research on performance acceleration for TEEs and Oblivious RAMs.

At present, we are developing a framework to accelerate the loading and attestation of memory-intensive programs in the enclave, providing a smoother startup performance.

HONORS AND AWARDS

2023 Zhiyuan Honors Scholarship	2% of SJTU
2024 Zhiyuan Honors Scholarship	2% of SJTU
Academic Dedicated Scholarship	Limited to 12 students in the cohort
SJTUCTF 2024	Freshman Exploration Award
SJTU × ZJUCTF 2025	**Silver Medal**, 8th place in SJTU

TEACHING EXPERIENCE

Principle and Practice of Computer Algorithms	Teaching Assistant	2025 Summer
Abstract Algebra	Teaching Assistant	2025 Fall

Projects

RISC-V CPU   [Repo]

An efficient CPU implemented in Verilog using the Tomasulo algorithm, supporting the RV32IC instruction set.

STLite   [Repo]

Course project for Data Structures, featuring C++ implementations of common STL containers. Additionally, B+ Tree is implemented.

Mx* Compiler   [Repo]

A compiler from a customized language to RISC-V assembly written in Java.

Skills

Programming:	C, C++, Python, Java, Verilog, Rocq Prover
Tools:	LaTeX, Git, Bash, CMake
Languages:	English(Fluent, TOEFL 107), Chinese(Mandarin, Wu)(Native)