

# Chenyuan Zhou

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## EDUCATION

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### Shanghai Jiao Tong University

2023.9 - 2027.6(expected)

B.S in computer science, **ACM Honors Class**

GPA(Core Courses): **3.94/4.3**

#### Selected courses:

- Algorithm Design and Analysis :**A+**, **98/100**
- Compiler Design and Implementation:**A+**, **99/100**
- Computer Architecture:**A+**, **97/100**
- Data Structure:**A+**, **97/100**
- Mathematical Analysis(Honor):**A+**, **95/100**

## RESEARCH INTEREST

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My major interest is **Robotic** and **Computer Vision**. Especially, at present, I'm interested in how to enhance model's perception of 3D structure and instruction following ability with multimodal data in the real world.

## RESEARCH EXPERIENCE

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### RHOS (Yonglu Li, Cewu Lu)

2025.6 - now

Our work focus on the precise manipulation with visual instruction and diverse tools adaptation, under the supervision of Yonglu Li and CeWu Lu.

## PROJECTS

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### Mx Compiler (Course Project)

[Link to Repo](#)

A compiler for Mx\* (an educational language with basic features of C), as well as Clang (with `mem2reg` and register allocation).

- Implemented various optimizations including SCCP, DCE, inlining, GVN & GCM, loop detection, and unrolling.
- Utilized SSA graph coloring to allocate registers based on liveness analysis.

### RISC-V5 CPU (Course Project)

[Link to Repo](#)

Designed a CPU in Verilog implementing the basic RISC-V5 instruction set.

- Implemented branch prediction and instruction prefetching.
- Successfully executed on FPGA.

### Partial Rollout for LLM RL (LLM Course Project)

[Link to Repo](#)

Decomposed the single rollout process into multiple turns and propagated unfinished rollouts to the next iteration, reducing the negative impact of long-tail rollouts.)

- Achieved a 30% increase in overall speed without performance degradation.
- Implemented partial code and conducted experiments in collaboration with Zeng Ji and Li Zhiyan. Details in [PR 1826](#)

### Visual Instruction and Automatic Tool Design for Precise Manipulation

Co-led the project developing visual instruction methods to improve the precision and tool-use ability of VLA models, combined with automatic tool design.

# AWARDS AND HONORS

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2023, 2024 Zhiyuan Honors Scholarship (2 % in SJTU)

# STUDENT WORK AND TEACHING EXPERIENCE

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Computer Programming, Teaching Assistant	2024 Fall
Data Structure, Teaching Assistant	2025 Spring
Principle and Practice of Computer Algorithms(AI), Teaching Assistant	2025 Summer
Vice Monitor of ACM Honors Class 2024	2024.9 - 2025.9

# SKILLS

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Programming	C++, Python, Java, Verilog,
Tools	Git, Solidworkers, ros2, L <sup>A</sup> T <sub>E</sub> X
Languages	Chinese(Native speaker), English(Fluent)