

# Xingyang Li

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## EDUCATION

### **S**hanghai **J**iao **T**ong **U**niversity(**SJTU**)

*Bachelor of Computer Science*

- Member of ACM Honors Class, which is an elite CS program for top 5% talented students
- **GPA** (All): **3.99**/4.3, Ranking: **4**/30, 13 A+ courses
- Selected Core Courses: Machine Learning: 97/100, Comprehensive Design for Computer System: 97/100, Compiler Design and Implementation: 97/100, Information Theory: 98/100, Principle and Practice of Computer Algorithms: 100/100, Advanced Compiler: 100/100, Linear Algebra: 100/100, Mathematical Logic: 100/100

Shanghai, China

Sept. 2022 - Present

## RESEARCH EXPERIENCE

Research interests: efficient algorithms and hardware for machine learning and mobile visual computing

### **E**merging **P**arallel **C**omputing **C**enter, **SJTU**

*Advisors: Prof. Jingwen Leng and Prof. Yu Feng at EPCC Lab, SJTU*

Shanghai, China

June. 2024 - Nov. 2024

- Explored efficient scalable point-based neural rendering models like Gaussian Splatting by reducing the dominating level-of-detail(LOD) tree traversal overhead. (*co-first author; under review of 62 DAC*)
- I proposed a memory-friendly algorithm to distribute the workload of tree traversal to different working units, boosting scalable point-based neural rendering models by taming workload imbalance and memory irregularity.

## COURSE PROJECTS

### **M**x\* **C**ompiler with **J**ust-in-time **C**ompiler(**JIT**) for **llvm**

*SJTU ACM Class Compiler Design and Implementation 2023 Assignment ( CS2966 Course Project )*

A compiler from a C++ & Java-like language to RV32I Assembly with multiple llvm-level and assembly-level optimizations. It also supports JIT compilation for llvm.

### **R**ISC-V **CPU** Implemented in **V**erilog **RTL**

*SJTU ACM Class Computer Architecture 2023 Assignment ( CS2951 Course Project )*

A Tomasulo RISC-V CPU with I-Cache and branch predictor. It can be successfully implemented on the FPGA board.

### **A**n **I**mplementation of the **G**oogle **F**ile **S**ystem(**GFS**)

*SJTU ACM Class Comprehensive Design for Computer System ( CS2913 Course Project )*

An implementation of GFS in Golang with fault-tolerance, snapshots, and reproduced benchmarks.

### **A** Real-time Efficient Domain Adaptation Model

*Outstanding Paper of SJTU ACM Class Machine Learning ( CS3308 Course Project )*

A domain-adaptation training framework leveraging the time of downloading dataset with 25% training speedup.

## HONORS & AWARDS

- 2024 Commercial Sponsorship Scholarship (**14 winners** each year in SJTU)
- 2023 Longfor Merit Scholarship (**Top 10** in Zhiyuan College, SJTU)
- 2022, 2023, 2024 Zhiyuan Honorary Scholarship (**Top 2%** in SJTU)
- 2023, 2024 Academic Excellence Scholarship (Ranked 4-th, 2-nd respectively in ACM Class of 2026)

## TEACHING EXPERIENCE

### **M**athematical **L**ogic

*Teaching Assistant of Professor Qiang Yin and Professor Yijia Chen*

Feb. 2024 - June. 2024

### **C**omputer **P**rogramming

*Teaching Assistant of Professor Huiyu Weng*

Sept. 2023 - Jan. 2024

Role as teaching assistant: Giving lectures and recitation classes, writing documents and sample solutions, grading homework, creating exam questions, etc.

## TECHNICAL SKILLS

**Languages:** Mandarin (native), English (proficient, CET6: 665/710, TOEFL: 115).

**Programming Languages:** Proficient in C/C++, CUDA, Go, Java, Python, and Verilog.