

# Quanquan Peng

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## EDUCATION

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### Shanghai Jiao Tong University

Bachelor of *Computer Science*

Shanghai, China

Aug. 2021 - Present

- Member of ACM Honors Class, an elite CS program for top talented students
- **Ranking: 1/50, GPA: 4.2/4.3**

## RESEARCH EXPERIENCE

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### Machine Vision and Intelligence Group (MVIg)

Undergraduate Researcher, coadvised by Prof. Cewu Lu and Prof. Yonglu Li

SJTU, Shanghai, China

Jul. 2023 - Present

Research Topic: Robotics (especially learning), Imitation Learning, and Reinforcement Learning

## PROJECTS

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### GH-NeRF

*Outstanding course project of Machine Learning | Python*

A NeRF-like model that uses multivariate Gaussian Distribution along with Spherical Harmonics accelerates the training process by 25% and effectively tackles the excessively blurring/alias problems, resulting in an additional reduction of the error rate by 6.4% on the LLFF dataset compared to NeRF's original implementation.

### Compiler for Mx\* Language

Java

A handmade compiler translating Mx\* language (which is a C++ and Java like language) into RV32I Assembly.

Designed based on LLVM IR, it achieved a performance close to GCC O2 on test cases with many optimizations.

### RISC-V CPU

*Course Project of Computer Architecture | Verilog*

A RISC-V CPU implemented in Verilog HDL, using Tomasulo algorithm for dynamic scheduling.

### peaCore: Rust Kernel

*Course Project of Operating System | Rust*

peaCore is a toy operating system kernel implemented by Rust language, which implemented RISC-V privileged mode, process scheduling, file system, etc.

### Google File System

GoLang

A simple implementation of the Google File System (GFS), a distributed file system developed by Google to provide efficient, reliable access to data using large clusters of commodity hardware.

## HONORS & AWARDS

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### Scholarship

- 2023 Huawei Scholarship
- 2022 Foresight-Sequoia Talent Development Fund
- 2022, 2023 Zhiyuan Honorary Scholarship (Top 1% in Shanghai Jiao Tong University)

### Programming Competition

- Gold Medal, The 2021 ACM-ICPC Asia-East Continent Final Contest
- Gold Medal, The 2021 ACM-ICPC Asia Shanghai Regional Contest
- Gold Medal, The 2021 CCPC Weihai Site Programming Contest
- Silver Medal, The 2021 ACM-ICPC Asia Macau Regional Contest

## TEACHING

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**Shanghai Jiao Tong University ACM-ICPC Team**

*Co-coach*

Jun. 2023 - Present

**Data Structure**

*Teaching Assistant* with Prof. Yong Yu

Mar. 2023 - Jun. 2023

## SKILLS

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**TOEFL:** 107 (Reading 29/Listening 29)

**Programming Languages:** Python, C++, Rust, Java, Golang, and Verilog