SHOUCHEN ZHOU

☎ (+86)156-2111-0636   ✉ zhoushch@shanghaitech.edu.cn

🎓 EDUCATION

Shanghaitech University   September 2021 – June 2025

GPA: 3.91/4   **Major GPA:** 4/4   **Rank:** 1/178

Tsinghua University   June 2025 – Present

Major: Mathematics

Core courses: Convex Optimization(A+), Introduction to Machine Learning(A+), Numerical Optimization(A+), Probability and Statistics for Information Science(A+),Computer Vision I(A+), Algorithms and Data Structures(A+), Introduction to Programming(A+), Digital Image Processing(A+), Project Practice for Reinforcement Learning(A+), Computer Graphics(A), Computer Architecture I(A), Fundamental of Information theory(A), Reinforcement Learning(A), Numerical Analysis(A)

👥 RESEARCH EXPERIENCE

VRVC Lab Hosted by Prof. Jingyi Yu, ShanghaiTech University   August 2022 – Present

We focus on utilizing mathematical theories and methods to explore the field of three-dimensional structure reconstruction. Using mathematical models. Our core work involves designing and optimizing data processing algorithms based on mathematical principles to improve the accuracy and efficiency of reconstruction.

We apply advanced mathematical tools such as optimization theory, signal processing, and numerical analysis techniques to handle and reconstruct large-scale datasets. Through these mathematical approaches, we aim to gain a deeper understanding of the spatial organization of microscopic systems, providing theoretical support for high-precision measurements and applications, while advancing the technology in related fields.

Publication:

- CryoFastAR: Fast Cryo-EM *Ab initio* Reconstruction Made Easy
  Jiakai Zhang, **Shouchen Zhou**, Haizhao Dai, Xinhang Liu, Peihao Wang, Zhiwen Fan, Yuan Pei, Jingyi Yu
  ICCV(International Conference of Computer Vision) 2025. https://arxiv.org/pdf/2506.05864

⚙ OTHER EXPERIENCE

Teaching Assistant for Introduction to Programming, Spring 2023   February 2022 – June 2022
Teaching Assistant for Linear Algebra, Fall 2023   September 2023 – January 2024
Teaching Assistant for Probability and Statistics, Spring 2024   February 2024 – July 2024
Teaching Assistant for Algorithms and Data Structure, Fall 2024   September 2024 – January 2025
Teaching Assistant for Introduction to Machine Learning, Spring 2025   February 2025 – June 2025

Carry out weekly recitations, correct and explain course assignments and exams, and programming assignments.

♡ AWARDS

Outstanding Student at ShanghaiTech University Academic Year 2021   December 2022
Outstanding Student at ShanghaiTech University Academic Year 2022   December 2023
Outstanding Student at ShanghaiTech University Academic Year 2023   December 2024
Shanghai Scholarship   December 2024
Outstanding graduates from Shanghai   June 2025

ℹ PERSONAL SKILLS

- Programming Language: Python, C, C++, Matlab, LaTeX
- Language ability: CET-4 : 570, CET-6 : 551
- Platform: Linux(Ubuntu), Windows