

Zeen (Harry) Chi

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EDUCATION

- **Massachusetts Institute of Technology, Department of EECS** Cambridge, MA
Undergraduate Special Student Program, Computer Science Feb. 2023 - Present
 - **Coursework:** Advances in Computer Vision, Design and Analysis of Algorithms, Matrix Methods, Introduction to Statistical Data Analysis
- **ShanghaiTech University, School of Information Science and Technology (SIST)** Shanghai, China
B. Eng. Candidate, Computer Science and Technology Sept. 2020 - June 2024
 - **Overall GPA:** 3.97/4.0 (rank 1/247 in SIST)
 - **Major GPA:** 4.0/4.0
 - **Selected coursework:** Computer Graphics (A+), Computer Architecture (A+), Introduction to Programming (A), Mathematical Analysis I & II (A+ & A), Probability and Statistics (A+)

RESEARCH EXPERIENCE

- **Long-tailed Distribution of Datasets in Human-Object Interaction Detection** Shanghai, China
Undergraduate Researcher, PLUS Lab, advised by Prof. Xuming He Sept. 2022 - Jan. 2023
 - Proposed a method of introducing the overall information of human posture as an a priori cue to improve the confidence level of the HOI detection output for the corresponding possible categories
 - Reviewed papers on cutting-edge transformers-based HOI detection algorithms and investigated instances of long-tailed distribution, especially the double long-tail of objects and actions in HOI datasets, and their impacts on detection results
 - Applied and evaluated multiple existing mainstream methods to alleviate the long-tailed distribution of HOI datasets

COURSE PROJECTS

- **Chinese Chess** [\[code\]](#) Shanghai, China
CS181: Artificial Intelligence Nov. 2022 - Jan. 2023
 - Created a multi-functional Chinese Chess game with multiple AI agents via Python and C++
 - Built the game panel for human players, with Pygame for Python and JUCE for C++, respectively
 - Implemented three AI agents, including Minimax Search, Q-Learning, and Monte-Carlo Tree Search
- **Ray Tracing NURBS Surface** [\[code\]](#) Shanghai, China
CS171: Computer Graphics I Dec. 2022 - Jan. 2023
 - Implemented a path tracer with global illumination for directly rendering untrimmed NURBS surfaces without tessellation; created more than 3300 C++ baseline
 - Applied surface refinement for better rendering quality and efficiency
 - Constructed a BVH to maintain the surface sub-patches and accelerate the ray-patch intersection process
- **Chrome Dino Minigame on Longan Nano** [\[code\]](#) Shanghai, China
CS110: Computer Architecture I May 2022 - June 2022
 - Implemented Chrome Dino pixel game on Longan Nano development board with RISC-V assembly language and C
 - Utilized integrated and external buttons of the board for UI and game control, respectively
- **Who is Flying over?** [\[code\]](#)[\[demo\]](#) Shanghai, China
SI100B: Introduction to Information Science and Technology Dec. 2020 - Jan. 2021
 - Built a website on Raspberry Pi that displays real-time information about regional flights
 - Utilized web crawler for data fetching and simultaneously displayed the data via LED and website
 - Implemented a fancy control panel on the website for real-time human-computer interactions, including region selection and LED control
 - Won an Excellent Course Project Award (**Top 1**) [\[poster\]](#)

HONORS AND AWARDS

- Scholarship (**Top 2%** of SIST students) Jan. 2022
- Scholarship (**Top 3%-7%** of SIST students) Dec. 2022
- The **Outstanding Individual** of industry practice Nov. 2022
- The **Outstanding Individual** of social practice Nov. 2021
- **First Prize**, the 2018 National Olympiad in Informatics in Provinces, Shandong Dec. 2018

SKILLS

- **Languages:** Python, C&C++, MATLAB
- **Tools:** OpenGL, PyTorch
- **Platforms:** Linux, macOS, Windows