

Xu Han

1ST-YEAR CS GRADUATE STUDENT

Huazhong University of Science and Technology

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“Make it count.”

Education

Huazhong University of Science and Technology (HUST)

Wuhan, China

MASTER OF SCIENCE (M.Sc.), COMPUTER SCIENCE, SCHOOL OF COMPUTER SCIENCE AND TECHNOLOGY

Sep. 2023 - Jun. 2026 (expected)

- Supervised by Prof. Xianzhi Li.
- GPA: 3.91 (2/160), First Prize Scholarship, Tencent Scholarship.

Shandong University (SDU)

Qingdao, China

BACHELOR OF ENGINEERING (B.ENG.), ARTIFICIAL INTELLIGENCE, SCHOOL OF COMPUTER SCIENCE AND TECHNOLOGY

Sep. 2019 - Jun. 2023

- Supervised by Prof. Mengbai Xiao, Institute of Intelligent Computing.
- GPA: 3.87 (88.7), Honours Degree (1/52), National Scholarship (Top 0.2% nationwide), Outstanding Thesis (Top 6 grads in CS, 2%).

Publication

[3] Mamba3D: Enhancing Local Features for 3D Point Cloud Analysis via State Space

ACM MM 2024

Model

XU HAN*, YUAN TANG*, ZHAOXUAN WANG, XIANZHI LI† (*EQUAL CONTRIBUTION, †CORRESPONDING AUTHOR)

GitHub

- We present Mamba3D, a state space model tailored for point cloud learning. Mamba3D surpasses existing methods in multiple tasks, achieving multiple SoTA, with only linear complexity.

[2] MiniGPT-3D: Efficiently Aligning 3D Point Clouds with Large Language Models using

ACM MM 2024

2D Priors

YUAN TANG, XU HAN, XIANZHI LI†, QIAO YU, YIXUE HAO, LONG HU, MIN CHEN (†CORRESPONDING AUTHOR)

GitHub

- We present MiniGPT-3D, an efficient and powerful 3D-LLM that aligns 3D points with LLMs using 2D priors. It has only 47.8M learnable parameters and is trained in just 26.8h on a single RTX 3090.

[1] patchDPCC: A Patchwise Deep Compression Framework for Dynamic Point Clouds

AAAI 2024

ZIRUI PAN, MENGBAI XIAO†, XU HAN, DONGXIAO YU, GUANGHUI ZHANG, YAO LIU (†CORRESPONDING AUTHOR)

- We propose patchDPCC to compress each frame of the point cloud video by divides frames into patch groups, and incorporate a feature transfer module to refine the feature quality.

Experience

Institute of Intelligent Computing, Shandong University

Qingdao, China

RESEARCH ASSISTANT, SUPERVISED BY PROF. MENGBAI XIAO.

Oct. 2020 - Jun. 2023

- We propose a dynamic point cloud upsampling model to reduce the bandwidth consumption of point cloud video streaming. To accelerate inference, we propose reducing inter-frame redundancy by aligning adjacent frames in feature space. This research won the **Outstanding Graduation Thesis Award** from Shandong University. We also applied this method to point cloud video compression, improving the quality of point cloud features, which is accepted by **AAAI 2024**.

Honors & Awards

SCHOLARSHIPS

- 04/2024 **Tencent Scholarship**, HUST
- 11/2023 **First Prize Scholarship**, HUST
- 10/2022 **National Scholarship**, Highest honor for undergraduates, top 0.2% nationwide
- 2021,2022 **Huawei Scholarship**, Two-year continuous
- 10/2022 **Second Prize Scholarship**, Top 10% in Department of Computer Science
- 10/2022 **Research and Innovation Scholarship**, Shandong University

Wuhan, China

Wuhan, China

Qingdao, China

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Qingdao, China

AWARDS

07/2023 **Outstanding Graduation Thesis Award**, Top 6 graduates in Department of Computer Science
06/2023 **Honours Bachelor Degree**, 1/52
06/2023 **Outstanding Graduates Award**, Shandong University
2021,2022 **Huawei-MOE (Ministry of Education) Future Star Award**, Two-year continuous
11/2021 **First Prize in China Undergraduate Mathematical Contest in Modeling**, Top 0.6% in 45K teams

Qingdao, China
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Skills

Programming Python, C/C++, Shell, LaTeX
Languages Native in Chinese (Mandarin), Fluent in English
Tools PyTorch, Vim, Git, Blender, CUDA
Others Basketball (Multiple awards), Electric Guitar