

# Xianfeng Wu

RA at HKUST &  
Researcher at Everlyn (Startup (stealth))

wxf20011228@gmail.com  
+86 177 8642 6997  
maradonarowxf.github.io  
orcid: 0000-0002-5113-5314

## EDUCATION

B.E. Artificial Intelligence, Jiangnan University, Wuhan, China, 2020-2024  
(Bingling Honours Degree)  
advisor: [Associate Prof. Zhongyuan Lai](#)

## RESEARCH EXPERIENCE

**Institute for Interdisciplinary Research, Jiangnan University** Wuhan, China  
Undergraduate Researcher Oct 2020 – May 2022  
Advisor: [Associate Prof. Zhongyuan Lai](#)

**School of Cyber Science and Engineering, Wuhan University** Wuhan, China  
Intern June 2022 – Dec 2022  
Advisor: [Prof. Libing Wu](#)

**Institute of Data Science, The University of Hong Kong** Pokfulam, HK  
Remote Intern Nov 2022 – May 2023  
Advisor: [Assistant Prof. Liangqiong Qu](#)

**School of Information Sciences, University of Illinois Urbana-Champaign** IL, USA  
Remote Intern Dec 2022 – May 2023  
Advisor: [Assistant Prof. Haohan Wang](#)

**School of Engineering, Westlake University** Hangzhou, China  
Summer Research Intern June 2023 – Oct 2023  
Advisor: [Assistant Prof. Tailin Wu](#)

**Department of Computer Science and Engineering, University at Buffalo, State  
University of New York** NY, USA  
Intern Jan 2023 – June 2024  
Advisor: [Prof. Junsong Yuan](#) & [Dr. Tianyu Luan](#)

**Academy of Interdisciplinary Studies, Hong Kong University of Science and  
Technology** Clear Water Bay, HK  
RA July 2024 – present

**Everlyn** ShenZhen, China  
Research July 2024 – present  
Advisor: [Assistant Prof. Harry Yang](#)

## RESEARCH AREAS

### Multi-modal Foundation model

**Computer Vision:** 3D reconstruction, generation

**AI4Science**

## SELECTED PUBLICATIONS

### Journal Articles

- 2023 Zhuangzhuang Zhang, Libing WL, Debiao He, Jianxin Li, Shuqin Cao, and Xianfeng Wu. “Communication-Efficient and Byzantine-Robust Federated Learning for Mobile Edge Computing Networks.” In: *IEEE Network* 37.4 (2023), pp. 112–119. DOI: 10.1109/MNET.006.2200651
- 2023 Fudong Ding, Libing Wu, Zhuangzhuang Zhang, Xianfeng Wu, Chao Ma, and Qin Liu. “A Low-Overhead Auditing Protocol for Dynamic Cloud Storage Based on Algebra.” In: *Security and Communication Networks* 2023 (2023). DOI: <https://doi.org/10.1155/2023/5477738>. URL: <https://www.hindawi.com/journals/scn/2023/5477738/>
- 2022 Xianfeng Wu, Xinyi Liu, Junfei Wang, Zhongyuan Lai, Jing Zhou, and Xia Liu. “Point cloud classification based on transformer.” In: *Computers and Electrical Engineering* 104 (2022), p. 108413. ISSN: 0045-7906. DOI: <https://doi.org/10.1016/j.compeleceng.2022.108413>. URL: <https://www.sciencedirect.com/science/article/pii/S0045790622006309>

### Conference Proceedings

- 2024 *Xianzu Wu*<sup>+</sup>, **Xianfeng Wu**<sup>+</sup>, Tianyu Luan, Yajing Bai, Zhongyuan Lai\*, Junsong Yuan\*, FSC: Few-point Shape Completion, Conference on Computer Vision and Pattern Recognition (CVPR24’) (CCF A co-first author)

## PATENT

- 2024 **Xianfeng Wu**, et al., 2024, Object classification method based on point cloud and related equipment, CNPatent, CN115456064B, filed Sep. 05 2022 and issued Feb. 02 2024.
- 2024 Zhongyuan Lai, Hui Xiong, Fengchun Zhou, **Xianfeng Wu**, Yajing Bai, et al., 2024, RGB image-based 3D hand pose estimation method, device and processing equipment, CN117953545B, filed Mar. 27 2024 and issued Jun. 21 2024.

## SOFTWARE COPYRIGHT

- 2024 Rate-distortion optimal shape coding and decoding software based on polygon approximation V5.0, 2024SR0163092, January 25th, 2024.
- 2024 Rate-distortion optimal shape coding and decoding software based on polygon approximation V2.4, 2024SR0220675, February 2nd, 2024
- 2024 Rate-distortion optimal shape coding and decoding software based on polygon approximation V4.1, 2024SR0296480, February 22th, 2024.

- 2023 Rate-distortion optimal shape coding and decoding software based on polygon approximation V4.0, 2023SR1263030, October 19th, 2023.
- 2023 Rate-distortion optimal shape coding and decoding software based on polygon approximation V3.1, 2023SR1286413, October 24th, 2023.
- 2023 Rate-distortion optimal shape coding and decoding software based on polygon approximation V2.3, 2023SR1184145, October 10th, 2023.
- 2022 Rate-distortion optimal shape coding and decoding software based on polygon approximation V3.0, 2022SR0373977, March 22, 2022.
- 2022 2D shape skeleton extraction software V1.1, 2022SR0347060, March 15, 2022.
- 2022 Rate-distortion optimal shape coding and decoding software based on polygon approximation V2.1, 2022SR0102715, January 17, 2022.
- 2021 Polygon Evolution Software for Planar Digital Contours V1.0, 2021SR1647057, November 5th, 2021.
- 2021 Rate-distortion optimal shape coding and decoding software based on curve approximation V1.0, 2021SR1536129, October 20th, 2021.
- 2021 Rate-distortion optimal shape coding and decoding software based on polygon approximation V2.0, 2021SR1536127, October 20th, 2021.
- 2021 Rate-distortion optimal shape coding and decoding software based on polygon approximation V1.0, 2021SR0785371, May 28th, 2021.

## AWARDS

### Awards and Honors

- 2024 ASC World Student Supercomputer Competition Second Prize
- 2023 President Scholarship (top scholarship in Jiangnan University; <math>0.1\%</math> student), Jiangnan University
- 2023 Wuhan Government Scholarship (top scholarship in Wuhan)
- 2023 Second Prize in Hubei Contest District in China Undergraduate Mathematical Contest in Modeling
- 2022 Second Prize in Hubei Contest District in China Undergraduate Mathematical Contest in Modeling
- 2022 ASC World Student Supercomputer Competition Second Prize

## EXTERNAL AND INTERNAL FUNDING

### A. MODERATOR

- I Sparse Point Cloud 3D Reconstruction Based on Point-Nerf and Diffusion Model  
National College Students' innovation and entrepreneurship training program  
(No.202311072004)  
2023/05-2024/05 RMB 10000

- 2 An Encoder-Decoder network-based point cloud completion method  
The second batch of student research sub-focus projects of Jiangnan University 2021 (No. 2021Bczd006)  
2021/10-2022/10 RMB 5000

## **B. Participation**

- 1 Privacy and security research of point cloud information processing for autonomous vehicles based on federated learning  
National College Students' innovation and entrepreneurship training program (No.202311072010)  
2023/05-2024/10 RMB 10000
- 2 Machine vision-based assessment of infant motor development  
Jiangnan University School-level Research Project (No. 2022SXZX16)  
2022/11-2024/11: RMB 70,000
- 3 Machine vision-based blast rock detection and trajectory prediction  
State Key Laboratory of Precision Blasting 2022 Exploratory Project of Independent Subjects (No. PBSKL2022201)  
2022/05-2024/05: RMB 200,000
- 4 Research on the Detection Method of Weakly Perceived Point Cloud Targets in Complex Scenes  
National Natural Science Foundation of China (No. 62106086)  
RMB 300,000
- 5 Research on weak perceptual target detection method based on deep attention-guided completion  
Nature Science Foundation of Hubei Province (No. 2021CFB564)  
RMB 80,000
- 6 Machine vision-based recognition of abnormal human postures and rehabilitation movements  
Key Research and Development program projects of Hubei Province (No. 2020BCB054)  
2020/09-2022/12: RMB 300,000

## **TEACHING**

- 2023 Teaching Assistant: Digital Image Processing  
2021 Teaching Assistant: Object Oriented Programming (C++)

## **SERVICE**

### **Academic Journal and Conference Reviewer**

Neurocomputing

Computers and Electrical Engineering (CAEE)

### **Membership in Professional Societies**

China Society of Image and Graphics (CSIG) Student Member

## **SKILLS**

Programming Python, Matlab, C/C++, Java, LaTeX, R  
Deep Learning PyTorch, TensorFlow