Xianzu Wu

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EDUCATION

B.E. Data Science and Big Data Technology, Yangtze University, Wuhan, China, 2020-2024

RESEARCH EXPERIENCE

Academy of Interdisciplinary Studies, Hong Kong University of Science and Technology Clear

Water Bay, HK

Research Intern Jan 2025 – present

EverlynResearcher
ShenZhen, China
Jan 2025 – present

Advisor: Assistant Prof. Harry Yang & Associate Prof. Sernam Lim

School of Engineering, Westlake University

Hangzhou, China

Research Intern

Jun 2024 – Dec 2024

Under the guidance of Assitant Professor Huan Wang. I collaborated with Prof. Jun Liu from Lancaster University on a monocular democraticizing 3D scene reconstruction project. I use Depth and normal estimation methods combined with 3D Self-Attention and Geometric Affine Fields to propose a Monocular 3D Scene. The **first** model that can effectively reconstruct the challenging **outdoor** scenes from a single view where I am a first author, this work will be submitted at the ICCV'25.

Department of Computer Science and Engineering, The State University of New York at Buffalo NY, USA

Remote Intern Jan 2023 – Jun 2024

Under the guidance of Prof. Junsong Yuan. I combined GAN and Transformer to propose a stable point cloud complementation model that can still complement point clouds well with only 64 partial point clouds(**First work**). We also present FPFH information entropy to prove the feasibility of our method. This work was accepted in the CVPR'24.

Subsurface Modeling and Intelligent Prospecting RD Center, Yangtze Unversity Wuhan, China Research Assistant Jul 2022 – Sep 2023

Under the guidance of Prof. Guozhong Gao.

School of Cyber Science and Engineering, Wuhan University

Wuhan, China

Intern

Jun 2022 – Dec 2022

Under the guidance of Prof. Libing Wu.

Key Laboratory of Exploration Technologies for Oil and Gas Resources, Ministry of Education, Yangtze University Wuhan, China

Undergraduate Researcher

Jul 2021 – 2022 Jul

The **first** effectively real-time sand detection has shown reliability and accuracy in determining production contributions and fluid phase changes. This work was published in the journal SN Applied Sciences, of which I am the first author.

RESEARCH AREAS

Computer Vision: 3D Reconstruction and Generation

Multi-modal Foundation model

PUBLICATIONS

Conference Proceedings

- Xianfeng Wu, Yajing Bai, Haoze Zheng, Harold Haodong Chen, Ye xin Liu, Zihao Wang, Xuran Ma, Wen-Jie Shu, **Xianzu Wu**, Harry Yang, Ser-Nam Lim, LightGen: Efficient Image Generation through Knowledge Distillation and Direct Preference Optimization. (Submit at ICCV'25).
- Xianzu Wu, Zhenxin Ai, Harry Yang, Sernam Lim, Jun Liu, Huan Wang*, Nigara: Normal-Integrated Geometric Affine Fields for Scene Reconstruction from a Single View. (Submit at ICCV'25).
- Xianzu Wu, Xianfeng Wu, Tianyu Luan, Yajing Bai, Zhongyuan Lai, and Junsong Yuan. "FSC: Few-point Shape Completion." In: *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition*. 2024, pp. 26077–26087

Journal Proceedings

Xianzu Wu, Lixiong Gan, Shixiong Yuan, and Rui Deng. "A preliminary study on wellbore flow interpretation of fiber optic vibration signals based on K-means clustering algorithm." In: SN Applied Sciences 4 (Aug. 2022). DOI: 10.1007/s42452-022-05117-6

PATENT

Zhongyuan Lai, Hui Xiong, Fengchun Zhou, Xianfeng Wu, Yajing Bai, **Xianzu Wu**,et al. 2024, RGB image-based 3D hand pose estimation method, device and processing equipment, 2024103536669, filed Mar. 27 2024

AWARDS

Awards and Honors

- Third Prize in Hubei Contest District in China Undergraduate Mathematical Contest in Modeling
- Third Prize in Hubei Contest District in China Undergraduate Mathematical Contest in Modeling
- National Third Prize of Mathematical Modeling Competition in Yangtze River Delta Universities

EXTERNAL AND INTERNAL FUNDING

Machine vision-based recognition of abnormal human postures and rehabilitation movements Key Research and Development program projects of Hubei Province (No. 2020BCB054) 2020/09-2022/07: RMB 1,000,000

- Intelligent Identification of Fluid around the Well Based on Fiber Optic Vibration Signal National Key Project of University Student Innovation and Entrepreneurship Program (No. 202210489004)
 2022/09-2023/07: RMB 20,000
- Research on Comprehensive Prediction Method of Casing Damage
 Hubei Provincial Education Department Science and Technology Research Key Project (No. D20191302)
 2019/09-2021/12: RMB 40,000

SERVICE

Academic Journal and Conference Reviewer

CMC-Computers, Materials Continua

Membership in Professional Societies

China Society of Image and Graphics (CSIG) Student Member

SKILLS

Programming Python, C/C++, Java, LaTex, Matlab, R

Deep Learning PyTorch, TensorFlow