Zhenrong Wang

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EDUCATION

Shenzhen University Sep. 2022 – Jun. 2026 (Expected)

Bachelor of Electronic Information Engineering *Average Score: 90.9/100,* ***Ranking: 1/247 (TOP 0.41%)***

- Core Courses: Machine Learning(100), Artificial Intelligence(97), Introduction to Robotics(96)

PUBLICATIONS

- Jianqi Zhong*, **Zhenrong Wang***, et al. "HiMAE: High-intensity Mask-based Autoencoder Framework for Unsupervised Human Action Recognition." *Artificial Intelligence.*(Major Revision). * *means equal contribution.*

- **Zhenrong Wang**, Qi zheng, et al. "End-to-End HOI Reconstruction Transformer with Graph-based Encoding." *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition. 2025.*

RESEARCH EXPERIENCE

Human action recognition based on unsupervised methods September 2023 – Present

Reasearch Assistant *Supervisor: Wenming Cao*

- Developed Hi-MAE, a High-Intensity Mask-based Autoencoder, enhancing human action recognition accuracy by 11.8% under weak supervision.
- Designed HE-CEB(High-Entropy Component Extraction Block) and HV-CEB(High-Velocity Component Extraction Block) mask strategies for temporal and spatial data, respectively, enhancing spatiotemporal feature learning in transformer architectures.

Human and Object Interaction Reconstruction from Single Image April 2024 – February 2025

Reasearch Assistant *Supervisor: Qi Zheng*

- For HOI reconstruction from monocular images, existing optimization-based models have problems such as slow inference speed, and all methods rely on explicit modeling of contact.
- We proposed an end-to-end HOI reconstruction method called HOI-TG, which achieved a breakthrough in reconstruction accuracy and inference speed.
- We proposed an implicit modeling method, which eliminates the reliance of previous methods on explicit modeling by using Graph residual blocks for humans and objects respectively.

Human to Humanoid and Humanoid-Scene Interaction January 2025 – Present

Reasearch Assistant *Supervisor: Qi Zheng*

- By deploying classic human to humanoid methods such as H2O and OmniH2O, we explore higher-performance human-to-humanoid architecture methods.

PATENT

- Wenming Cao, **Zhenrong Wang**, et al. "A 3D Human Action Recognition Method and Device Based on Unsupervised Masking Algorithms" CN202410436858.6 Authorlized.

- Qi Zheng, **Zhenrong Wang** et al. "A Monocular Image Human Interaction Reconstruction Method and System Based on Graph Embedding Encoding" CN202411931547.3 Substantive Examination.

HONOURS & AWARDS

Shenzhen Pengcheng Scholarship **(0.3%)**
National Inspiration Scholarship
Shenzhen University First-Class**(1%)** Academic Scholarship(2024)
Shenzhen University Second-Class**(3%)** Academic Scholarship(2023)

SKILLS

Languages: English (IELTS in preparation), Mandarin (Native)
Research Methods: Python, Pytorch, Linux, Git.