Zhenrong Wang

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Education

Shenzhen University, BS in Electronic Information Engineering   Sep. 2022 – Jun. 2026
- **Average Score**: 90.9/100, **Ranking: 1/247 (TOP 0.41%)**
- **Core Courses:** Machine Learning(100), Artificial Intelligence(97), Introduction to Robotics(96)

Experience

Human to Humanoid and Humanoid-Scene Interaction   Jan. 2025 – Present
Research Assistant, Supervisor: Qi Zheng
- Explore the control strategy of humanoid robots and the skill learning between humanoid and scene interaction.

Human and Object Interaction Reconstruction from Single Image   Apr. 2024 – Feb. 2025
Research 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 Action Recognition Based on Unsupervised Methods   Sep. 2023 – Sep. 2024
Research Assistant, Supervisor: Wenming Cao
- Developed Hi-MAE, a High-Intensity Mask-based Autoencoder, enhancing human action recognition accuracy by 11.8% under semi-supervised semi-supervised.
- 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.

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. Highlight* [Paper]

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 Under 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 : 6.0), Mandarin (Native).

Research Methods: Python, Pytorch, Linux, Git.