

Ziwei Chen

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EDUCATION

Southeast University

Sept. 2020 – Present

A Master student, Control Science and Engineering

- **Supervisor:** Prof. Wankou Yang

- **Research Interests:** computer vision, human-centric perception, generative adversarial nets

Nanjing University of Science and Technology

Sept. 2016 – Jun. 2020

Bachelor of Engineering, Automation

- **GPA: 3.78/4.00**, ranking **7/140** in major.

WORK EXPERIENCE

Kuaishou Technology

Sept. 2021 – Jan. 2022

Research intern of Y-tech

Beijing, China

- Improved contrastive learning via exploiting 3D human kinematic prior for human-centric pre-training.
- Explored StyleGAN and NeRF for full body image synthesis.

PAPERS

1. LiftedCL: Lifting Contrastive Learning for Human-Centric Perception

Ziwei Chen, Qiang Li, Xiaofeng Wang, Wankou Yang

Submitted to **ICLR 2023** (under review, average score: **7**, ranking **153/4849**)

2. Video Based Fall Detection Using Human Poses

Ziwei Chen, Yiye Wang, Wankou Yang

CCF Big Data, 2022

SELECTED PROJECTS

• PG3D: Pose-Guided 3D-Aware Human Body Generation

Aug. 2022 – Present

- PG3D enables synthesis of high-quality and multi-view consistent full body images (512x512).
- Pose-condition and camera-condition enables precious control of human pose and camera view.
- PG3D achieves state-of-the-art results on SHHQ dataset.

• LiftedCL: Lifting Contrastive Learning for Human-Centric Perception

Oct. 2021 – May. 2022

- A simple yet effective contrastive learning framework to exploit 3D human structure information for human-centric pre-training which only requires single-view human images.
- LiftedCL outperforms SOTA self-supervised methods on four human-centric downstream tasks including 2D/3D human pose estimation, human shape estimation and human parsing .

• A ROS-Based Fall Detection System

Mar. 2021 – Aug. 2021

- A video-based fall detection model which can achieve 18/63 FPS on a non-GPU/GPU platform.
- A ROS-based fall detection system using human poses.
- Code is available at <https://github.com/SeanChen0220/PoseFall>.

AWARDS

- Chiha National Scholarship
- China Robot Competition: First Class Prize
- NJUST Youth Medal (6 in total)
- NJUST Student Scholarship: The Grand Prize (1%)