

# Zhizhong Huang

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## SUMMARY

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I am a last-year Ph.D. student at Fudan University advised by [Prof. Junping Zhang](#) and [Dr. Hongming Shan](#). Previously, I got my bachelor's degree from Sichuan University in 2019. My main research interests include representation learning, unsupervised/semi-supervised learning, and generative models. I am highly self-motivated, of great passion/coding skills, and able to work independently.

I am expected to graduate in June 2024.

## EDUCATION

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- 2019 - 2024 Ph.D. candidate in Computer Science at **Fudan University**, Shanghai, China.  
2015 - 2019 Bachelor in Software Engineering at **Sichuan University**, Chengdu, China.  
GPA: 3.71/4.0 (top 4%).

## HONORS AND AWARDS

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- 2016 - 2017 National Scholarship.  
2017 - 2018 National Scholarship.  
2020 - 2021 National Scholarship.  
2022 - 2023 National Scholarship.  
2021 Second prize of CCF University Student Academic Show (PhD Group) [Chinese Link](#)

## SELECTED PUBLICATIONS

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### Face Aging/Editing/Recognition

- **Zhizhong Huang**, Junping Zhang and Hongming Shan. “When Age-Invariant Face Recognition Meets Face Age Synthesis: A Multi-Task Learning Framework and A New Benchmark.” *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)* 2022. [Code](#) | [arXiv](#)
- **Zhizhong Huang**, Shouzhen Chen, Junping Zhang, and Hongming Shan. “PFA-GAN: Progressive Face Aging with Generative Adversarial Network.” *IEEE Transactions on Information Forensics and Security (TIFS)* 2021. [Code](#) | [arXiv](#)
- **Zhizhong Huang**, Junping Zhang, and Hongming Shan. “When Age-Invariant Face Recognition Meets Face Age Synthesis: A Multi-Task Learning Framework.” *Proceedings of IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR Oral)* 2021. [Code](#) | [arXiv](#)
- **Zhizhong Huang**, Siteng Ma, Junping Zhang, and Hongming Shan. “Adaptive Nonlinear Latent Transformation for Conditional Face Editing.” *International Conference on Computer Vision (ICCV)* 2023. [Code](#) | [arXiv](#)
- **Zhizhong Huang**, Shouzhen Chen, Junping Zhang, and Hongming Shan. “AgeFlow: Conditional Age Progression and Regression with Normalizing Flows.” *International Joint Conference on Artificial Intelligence (IJCAI)* 2021. [Code](#) | [arXiv](#)

### Self-supervised Learning

- **Zhizhong Huang**, Jie Chen, Junping Zhang and Hongming Shan. “Learning Representation for Clustering via Prototype Scattering and Positive Sampling.” *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)* 2022. [Code](#) | [arXiv](#)
- **Zhizhong Huang**, Junping Zhang, and Hongming Shan. “Twin Contrastive Learning with Noisy

## Objet Counting/Detection

- **Zhizhong Huang**, Mingliang Dai, Yi Zhang, Junping Zhang and Hongming Shan. “Point, Segment and Count: A Generalized Framework for Object Counting.” Proceedings of IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**) 2024. [Code](#) | [arXiv](#)
- Jiaqi Gao, **Zhizhong Huang**, Yiming Lei, Hongming Shan, James Z. Wang, Fei-Yue Wang and Junping Zhang. “Deep Rank-Consistent Pyramid Model for Enhanced Crowd Counting.” IEEE Transactions on Neural Networks and Learning Systems (**TNNLS**) 2023. [Code](#) | [arXiv](#)
- Mingliang Dai, **Zhizhong Huang**, Jiaqi Gao, Hongming Shan, Junping Zhang. “Cross-head Supervision for Crowd Counting with Noisy Annotations.” Proceedings of IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP**) 2023. [Code](#) | [arXiv](#)

## Medical Imaging

- **Zhizhong Huang**, Junping Zhang, Yi Zhang, and Hongming Shan. “DU-GAN: Generative Adversarial Networks with Dual-Domain U-Net Based Discriminators for Low-Dose CT Denoising.” IEEE Transactions on Instrumentation and Measurement (**TIM**) 2021. [Code](#) | [arXiv](#)
- Yuan Li, **Zhizhong Huang**, Xiaoi Dong, Weibo Liang, Hui Xue, Lin Zhang, Yi Zhang, and Zhenhua Deng. “Forensic age estimation for pelvic X-ray images using deep learning.” **European Radiology** 2019. **Equal contributions.** [DOI](#)
- Weiyi Yu, **Zhizhong Huang**, Junping Zhang and Hongming Shan. “SAN-Net: Learning Generalization to Unseen Sites for Stroke Lesion Segmentation with Self-Adaptive Normalization.” Computers in Biology and Medicine (**CIBM**) 2023. [Code](#) | [DOI](#)

## PROJECTS

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### Pytorch-openpose (over 1.8k stars)

[Github](#)

Pytorch implementation of openpose including Hand and Body Pose Estimation.

### Precipitation-Nowcasting (500 stars)

[Github](#)

Implemented a pytorch-based encoder-forecaster model with RNNs including (TrajGRU, ConvLSTM) to do precipitation nowcasting.

### Torch clustering

[Github](#)

A pure PyTorch implementation of kmeans and GMM with distributed clustering.

## SKILLS AND SERVICES

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**English** CET-6

**Reviewer** Top Conferences such as ICML, NIPS, CVPR, *etc.*

**Coding** Python, PyTorch, *etc.*