Zhizhong Huang

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Summary

I am a fourth-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 unsupervised/semi-supervised learning, generative model and biometrics, especially face-related applications. I am highly self-motivated, of great passion/coding skills, and able to work independently.

Education

2019 - present	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

2016 - 2017	National Scholarship.
2017 - 2018	National Scholarship.
2020 - 2021	National Scholarship.
2021	Second prize of CCF University Student Acaemic Show (PhD Group) Chinese Link

Publications

Journal

- **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**, 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**, 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, 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
- 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
- Yuan Li, **Zhizhong Huang**, Xiaoai 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 29, no. 5 (2019): 2322-2329 DOI

Conference

- **Zhizhong Huang**, Junping Zhang, and Hongming Shan. "Twin Contrastive Learning with Noisy Labels." Proceedings of IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**) 2023. 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**, 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
- **Zhizhong Huang**, Junping Zhang, and Hongming Shan. "RoutingGAN: Routing Age Progression and Regression with Disentangled Learning." Proceedings of IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP**) 2021. 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
- Haiping Zhu, **Zhizhong Huang**, Hongming Shan, and Junping Zhang. "Look globally, age locally: Face aging with an attention mechanism." Proceedings of IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP**) 2020. Code | arXiv

Preprint

- Jiaqi Gao, **Zhizhong Huang**, Yiming Lei, James Z. Wang, Fei-Yue Wang and Junping Zhang. "S2FPR: Crowd Counting via Self-Supervised Coarse to Fine Feature Pyramid Ranking." Code | arXiv

Projects

Pytorch-openpose (over 1.5k stars) Github
Pytorch implementation of openpose including Hand and Body Pose Estimation.

Precipitation-Nowcasting (445 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

English CET-6
Reviewer Top Conferences such as ICML, NIPS, CVPR, *etc.*
Coding Python, PyTorch, *etc.*