

ZHEDONG ZHENG

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Research Interests

Computer Vision and Machine Learning

Image Retrieval, Target Re-identification, Image-text Understanding

Image Generation, Domain Adaptation, Adversarial Samples

Education & Internships

University of Technology Sydney , Sydney, Australia	2017 - 2021
Ph.D Student (Advisors: Prof. Yi Yang and Dr. Liang Zheng)	
Baidu Research , Beijing, China	2020
Remote Research Intern (Hosts: Mr. Minyue Jiang and Dr. Xiao Tan)	
Nvidia Research , San Jose, United States	2018
Research Intern (Hosts: Dr. Xiaodong Yang, Dr. Zhiding Yu and Dr. Jan Kautz)	
Fudan University , Shanghai, China	2012 - 2016
B.S. in Computer Science (Advisor: Prof. Xiangyang Xue)	

Awards & Competitions

Awards

2021 IEEE Circuits and Systems Society Outstanding Young Author Award (*1 recipient world-wide*)

Zhejiang Lab's International Talent Fund for Young Professionals (No.ZJ2020GZ021) 2021

UTS Vice-Chancellor's Conference Fund, 2020

First-class Scholarship at Fudan University 2013, 2014, 2015, 2016

EMC Scholarship, 2013

US Patent Application: Image identification using neural networks 16357047

Competitions

AICity Challenge: Language-based Vehicle Retrieval Challenge, Rank 1st / 15 teams, CVPR 2021

AICity Challenge: Vehicle Re-identification Challenge, Rank 2nd / 51 teams, CVPR 2021

Evoked Expressions from Videos (EEV) Challenge, Rank 2nd / 11 teams, CVPR 2021

AICity Challenge: Vehicle Re-identification Challenge, Rank 1st / 64 teams, CVPR 2020

AICity Challenge: Vehicle Re-identification Challenge, Rank 4th / 84 teams, CVPR 2019

VisDA: Semi-Supervised Domain Adaptation Challenge, Rank 4th / 57 teams, ICCV 2019

Publications

Journals

1. Rectifying Pseudo Label Learning via Uncertainty Estimation for Domain Adaptive Semantic Segmentation.

International Journal of Computer Vision (**IJCV**), 2020.

Zhedong Zheng, Yi Yang

2. A Discriminatively Learned CNN Embedding for Person Re-identification.

ACM Transactions on Multimedia Computing, Communications, and Applications (**TOMM**), 2018.

Zhedong Zheng, Liang Zheng, Yi Yang (**ESI Highly Cited Paper**)

3. Pedestrian Alignment Network for Large-scale Person Re-identification.

IEEE Transactions on Circuits and Systems for Video Technology (**TCSVT**), 2019.

Zhedong Zheng, Liang Zheng, Yi Yang (**ESI Highly Cited Paper**)

4. Dual-Path Convolutional Image-Text Embedding with Instance Loss.
ACM Transactions on Multimedia Computing, Communications, and Applications (**TOMM**), 2020.
Zhedong Zheng, Liang Zheng, Michael Garrett, Yi Yang, Mingliang Xu, Yi-Dong Shen
5. VehicleNet: Learning Robust Visual Representation for Vehicle Re-identification.
IEEE Transactions on Multimedia (**TMM**), 2020.
Zhedong Zheng, Tao Ruan, Yunchao Wei, Yi Yang, Mei Tao
6. Multi-pseudo Regularized Label for Generated Samples in Person Re-Identification.
IEEE Transactions on Image Processing (**TIP**), 2018.
Yan Huang, Jinsong Xu, Qiang Wu, **Zhedong Zheng**, Zhaoxiang Zhang, Jian Zhang
7. Camstyle: a novel data augmentation method for person re-identification.
IEEE Transactions on Image Processing (**TIP**), 2018.
Zhun Zhong, Liang Zheng, **Zhedong Zheng**, Shaozi Li, Yi Yang (**ESI Highly Cited Paper**)
8. Improving Person Re-identification by Attribute and Identity Learning.
Pattern Recognition (**PR**), 2019.
Yutian Lin, Liang Zheng, **Zhedong Zheng**, Yu Wu, Zhilan Hu, Chenggang Yan, Yi Yang (**ESI Highly Cited Paper**)
9. Bayesian query expansion for multi-camera person re-identification.
Pattern Recognition Letters, 2018.
Yutian Lin, **Zhedong Zheng**, Hong Zhang, Chenqiang Gao, Yi Yang
10. Diagnose like a Radiologist: Attention Guided Convolutional Neural Network for Thorax Disease Classification.
Pattern Recognition Letters, 2020.
Qingji Guan, Yaping Huang, Zhun Zhong, **Zhedong Zheng**, Liang Zheng, Yi Yang
11. Unsupervised Eyeglasses Removal in the Wild.
IEEE Transactions on Cybernetics, 2020.
Bingwen Hu, **Zhedong Zheng**, Ping Liu, Wankou Yang, Mingwu Ren
12. Each Part Matters: Local Patterns Facilitate Cross-view Geo-localization.
IEEE Transactions on Circuits and Systems for Video Technology (**TCSVT**), 2021.
Tingyu Wang, **Zhedong Zheng**, Chenggang Yan, Jiyong Zhang, Yaoqi Sun, Bolun Zheng, Yi Yang

Refereed Conferences

1. Unlabeled Samples Generated by GAN Improve the Person Re-identification Baseline in vitro.
IEEE International Conference on Computer Vision (**ICCV**), 2017. (Spotlight)
Zhedong Zheng, Liang Zheng, Yi Yang (**Cited by 1000+ times**)
2. Joint Discriminative and Generative Learning for Person Re-identification.
IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2019. (Oral)
Zhedong Zheng, Xiaodong Yang, Zhiding Yu, Liang Zheng, Yi Yang, Jan Kautz
3. Unsupervised Scene Adaptation with Memory Regularization in vivo.
International Joint Conference on Artificial Intelligence (**IJCAI**), 2020.
Zhedong Zheng, Yi Yang
4. University-1652: A Multi-view Multi-source Benchmark for Drone-based Geo-localization.
ACM Multimedia (**ACM MM**), 2020.
Zhedong Zheng, Yunchao Wei, Yi Yang
5. Going beyond real data: A robust visual representation for vehicle re-identification
IEEE Conference on Computer Vision and Pattern Recognition Workshop (**CVPR Workshop**), 2020

Zhedong Zheng, Minyue Jiang, Zhigang Wang, Jian Wang, Zechen Bai, Xuanmeng Zhang, Xin Yu, Xiao Tan, Yi Yang, Shilei Wen and Errui Ding (**Challenge Winner**)

6. Real-World Automatic Makeup via Identity Preservation Makeup Net.

International Joint Conference on Artificial Intelligence (**IJCAI**), 2020.

Zhikun Huang, **Zhedong Zheng**, Chenggang Yan, Hongtao Xie, Yaoqi Sun, Jianzhong Wang, Jiyong Zhang

7. Decoupled and Memory-Reinforced Networks: Towards Effective Feature Learning for One-Step Person Search.

The AAAI Conference on Artificial Intelligence (**AAAI**), 2021.

Chuchu Han, **Zhedong Zheng**, Changxin Gao, Nong Sang, Yi Yang

8. Macro-Micro Adversarial Network for Human Parsing.

European Conference on Computer Vision (**ECCV**), 2018.

Luo Yawei, **Zhedong Zheng**, Liang Zheng, Tao Guan, Junqing Yu, Yi Yang

9. Camera Style Adaptation for Person Re-identification.

IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2018.

Zhun Zhong, Liang Zheng, **Zhedong Zheng**, Shaozi Li, Yi Yang

ArXiv Papers

1. Query Attack via Opposite-Direction Feature: Towards Robust Image Retrieval.

Zhedong Zheng, Liang Zheng, Yi Yang, Fei Wu

2. Parameter-Efficient Person Re-identification in the 3D Space.

Zhedong Zheng, Yi Yang

3. Adaptive Boosting for Domain Adaptation: Towards Robust Predictions in Scene Segmentation.

Zhedong Zheng, Yi Yang

4. Progressive Local Filter Pruning for Image Retrieval Acceleration.

Xiaodong Wang, **Zhedong Zheng**, Yang He, Fei Yan, Zhiqiang Zeng, Yi Yang

Review Services

IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)

International Journal of Computer Vision (IJCV)

IEEE Transactions on Image Processing (TIP)

IEEE Transactions on Multimedia (TMM)

IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)

ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM)

Computer Vision and Pattern Recognition (CVPR)

International Conference on Computer Vision (ICCV)

European Conference on Computer Vision (ECCV)

International Joint Conference on Artificial Intelligence (IJCAI)

AAAI Conference on Artificial Intelligence (AAAI)

ACM Multimedia (ACM MM)

Open Source

Codes and models for my published papers are available on my GitHub: <https://github.com/layumi> (5,700 stars and 1,400 followers)