Rui Zhao (zhaorui.xyz)

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Summary

- 15-year R&D experience on large-scale supervised/unsupervised object recognition and applications in a wide range of business.
- 10-year experience of leading and delivering industrial projects.
- Management experience over 100 people.
- Outstanding academic record with 100+ papers published in top conferences and journals, and over 10,000 Google Scholar citations.
- Fast learner & team player with passionate commitment at work.

Working Experience

SenseTime Group Limited	**CTO of Smart City Group**	2023-now
QingYuan Research Institute, Shanghai Jiao Tong Univ.	**Adjunct Researcher**	2020-2022
Shenzhen Institute of Adv. Tech., CAS	**Adjunct Researcher (Professor)**	2020-2022
SenseTime Group Limited	**Research Executive Director**	2019-2022
SenseTime Group Limited	**Research Director**	2018-2019
SenseNets Technology	**CTO**	2017-2018
SenseNets Technology	**R&D VP**	2016-2017
SenseNets Technology	**R&D Director**	2015-2016
SenseTime Group Limted	**Senior Researcher**	2015-2016
The Chinese University of Hong Kong	**Research Assistant**	2010-2011

Education

The Chinese University of Hong Kong (CUHK), Shatin, Hong Kong	2010-2015
Doctor of Philosophy, Electronic Engineering	
University of Science and Technology of China (USTC), Hefei, China	2006-2010
Bachelor, Information Science and Electronic Engineering	

Grants, Honors and Awards

- Top 100 AI Chinese Young Scholars (Baidu)	2022
- AI 2000 Most Influential Scholar Award (AMiner)	2022
- Shenzhen Artificial Intelligence Scientific Progress Award (SAAI)	2022
- Shenzhen May 1st Labor Medal (Shenzhen Municipal Federation of Trade Unions)	2022
- Excellent Technology and Innovation Award (First Prize) (Guangdong Provincial Government)	2020

- Dean's Innovation Technology Breakthrough Award (First Prize) (SenseTime)   2020
- Outstanding Team Award (Highest Award in SenseTime)   2020
- Excellent Scientific Progress Award (Second Prize)   2019
  (Shenzhen Municipal Government)
- Wu Wen Jun AI Award for Scientific and Technology Progress   2019
  (Ministry of Education of China)
- Outstanding Team Award (SenseTime)   2018
- Dean's Innovation Technology Breakthrough Award (First Prize) (SenseTime)   2018
- Black Sheep Award (SenseTime, 1‰)   2018
- Excellent Manager Award (SenseNets)   2016-2017
- Ling-Hang Talent (Nanshan District Government)   2017
- Peacock Program Talent Award (Shenzhen Municipal Government)   2016
- ECCV Outstanding Reviewer Award   2016
- CVPR Doctoral Consortium Award (Mentor: Trevor Darrell)   2015
- Commendation for Outstanding Tutorial (CUHK)   2014
- ICCV Student Travel Grant   2013
- Postgraduate Grants for Overseas Academic Activies (CUHK)   2013
- Postgraduate Studentship (CUHK)   2011-2014
- Second Prize in Mathematical Contest in Modeling (USTC)   2009
- Excellence Award in RoboGame Contest (USTC)   2008
- Excellent Undergraduate Scholarship (USTC)   2007-2009
- Excellent Freshman Scholarship (USTC)   2006

PUBLICATIONS (click to check full list)

ArXiv Preprints   A1. H. Li, **R. Zhao**, and X. Wang, "Highly Efficient Forward and Backward Propagation of Convolutional Neural Networks for Pixelwise Classification," *Preprint*, ArXiv:1412.4526

Book Chapters   B1. X. Wang, and **R. Zhao**, "Person Re-Identification: System Design and Evaluation Overview," *in book "***Person Re-identification***" edited by Shaogang Gong, Marco Cristani, Shuicheng Yan, and Chen Change Loy, published by Springer*, 2014.

Peer-reviewed Journal Papers   J2. **R. Zhao**, W. Ouyang and X. Wang, "Person Re-identification by Salience Learning," *in IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), vol.39, pp.356-370, 2017.

J1. **R. Zhao** and X. Wang, "Counting Vehicles from Semantic Regions," *in IEEE Transactions on Intelligent Transportation Systems* (**TITS**), vol.14, no.2, pp.1016-1022, March 2013.

Peer-reviewed Conference Papers   C30. Zhiyang Chen, Yousong Zhu, Fan Yang, Wei Li, Chaoyang Zhao, Zhaowen Li, Liwei Wu, **Rui Zhao**, Jinqiao Wang, Ming Tang, "Decouple Spatial and Channel Dimension in MLP" submitted to International Conference on Computer Vision (**AAAI**) 2022.

C29. Dedong Li, Zhenyu Mao, Ziyue Li, **Rui Zhao**, "RANG-AT&T: RoAd Network Graph Augmented Transformer for Trajectory Representation Learning" submitted to International Conference on Computer Vision (**AAAI**) 2022.

C28. Zhenyu Mao, Dedong Li, Ziyue Li, **Rui Zhao**, "Trajectory-guided Contrastive Representation Learning on Road Network Graph" submitted to International Conference on Computer Vision (**AAAI**) 2022.

C27. Kaijian Liu, Hong Zhang, Shixiang Tang, Lihong Zheng, Ziyue Li, **Rui Zhao**, "MAGNET: Modality-Agnostic distribution Graph NETwork for Person Clustering" submitted to International Conference on Computer Vision (**AAAI**) 2022.

C26. Shijie Yu, Feng Zhu, Dapeng Chen, **Rui Zhao**, Haobin Chen, Shixiang Tang, Jingguo Zhu, Yu Qiao, "Multiple Domain Experts Collaborative Learning: Multi-Source Domain Generalization For Person Re-Identification" submitted to International Conference on Computer Vision (**AAAI**) 2022.

C25. Shaobo Lin, Xingyu Zeng, Dapeng Chen, **Rui Zhao**, "MDFL: A Unified Framework with Meta-dropout for Few-shot Learning" submitted to International Conference on Computer Vision (**AAAI**) 2022.

C24. Shijie Yu, Shihua Li, Haobin Chen, Feng Zhu, **Rui Zhao**, Yu Qiao, "SRViP: A Video Benchmark for Cloth Changing Person Re-Identification" submitted to Neural Information Processing Systems (**NeurIPS**) 2022.

C23. Shixiang Tang, Lei Bai, Feng Zhu, **Rui Zhao**, Wanli Ouyang, "Relative Contrastive Loss for Self-supervised Representation Learning" submitted to Neural Information Processing Systems (**NeurIPS**) 2022.

C22. Zhaowen Li, Zhiyang Chen, Fan Yang, Wei Li, Yousong Zhu, Chaoyang Zhao, Rui Deng, Liwei Wu, **Rui Zhao**, Ming Tang, Jinqiao Wang, "MST: Masked Self-Supervised Transformer for Visual Representation" submitted to Neural Information Processing Systems (**NeurIPS**) 2022.

C21. Ye Zheng, Xiang Wang, Rui Deng, Tianpeng Bao, **Rui Zhao**, Liwei Wu, "Focus Your Distribution: Coarse-to-Fine Non-Contrastive Learning for Anomaly Detection and Localization" submitted to Neural Information Processing Systems (**NeurIPS**) 2022.

C20. Chen Zhao, Yixiao Ge, Feng Zhu, **Rui Zhao**, Hongsheng Li, Mathieu Salzmann, "Progressive Correspondence Pruning by Consensus Learning " in International Conference on Computer Vision (**ICCV**) 2021.

C19. Bo Zhao, Shixiang Tang, Dapeng Chen, Hakan Bilen, **Rui Zhao**, "Continual Representation Learning for Biometric Identification" *in Winter Conference on Applications of Computer Vision* (**WACV**) 2021.

C18. Yixiao Ge, Feng Zhu, **Rui Zhao**, Hongsheng Li, "Structured Domain Adaptation for Unsupervised Person Re-identification", *in arXiv:2003.06650*, 2020.

C17. Yixiao Ge, Haibo Wang, Feng Zhu, **Rui Zhao**, Hongsheng Li, "Self-supervising Fine-grained Region Similarities for Large-scale Image Localization" *in European Conference on Computer Vision* (**ECCV**) 2020.

C16. Xiao Zhang, **Rui Zhao**, Yu Qiao, Hongsheng Li, "RBF-Softmax: Learning Deep Representative Prototypes with Radial Basis Function Softmax" *in European Conference on Computer Vision* (**ECCV**) 2020.

C15. Shijie Yu, Shihua Li, Dapeng Chen, **Rui Zhao**, Junjie Yan, Yu Qiao, "COCAS: A Large-Scale Clothes Changing Person Dataset for Re-identification," *in IEEE International Conference on*

Computer Vision and Pattern Recognition (**CVPR**) 2020.

C14. Senhui Guo, Jing Xu, Dapeng Chen, Chao Zhang, Xiaogang Wang, **Rui Zhao**, "Density-Aware Feature Embedding for Face Clustering," *in IEEE International Conference on Computer Vision and Pattern Recognition* (**CVPR**) 2020.

C13. Lei Yang, Dapeng Chen, Xiaohang Zhan, **Rui Zhao**, Chen Change Loy, Dahua Lin, "Learning to Cluster Faces via Confidence and Connectivity Estimation," *in IEEE International Conference on Computer Vision and Pattern Recognition* (**CVPR**) 2020.

C12. Suichan Li, Dapeng Chen, Bin Liu, Nenghai Yu, **Rui Zhao**, "Memory-Based Neighbourhood Embedding for Visual Recognition," *in IEEE International Conference on Computer Vision* (**ICCV**) 2019.

C11. X. Zhang, **R. Zhao**, Y. Qiao, X. Wang , and H. Li, "AdaScale: Adaptively Scaling Cosine Logits for Effectively Learning Deep Face Representations," *in IEEE International Conference on Computer Vision and Pattern Recognition* (**CVPR**) 2019.

C10. X. Zhang, **R. Zhao**, J. Yan, M. Gao, Y. Qiao, X. Wang , and H. Li, "P2SGrad: Refined Gradients for Optimizing Deep Face Models," *in IEEE International Conference on Computer Vision and Pattern Recognition* (**CVPR**) 2019.

C9. J. Xu, **R. Zhao**, F. Zhu, and W. Ouyang, "Attention-Aware Compositional Network for Person Re-identification," *in IEEE International Conference on Computer Vision and Pattern Recognition* (**CVPR**) 2018.

C8. Z. Zhao, H. Li, **R. Zhao** and X. Wang, "Crossing-line Crowd Counting with Two-phase Deep Neural Networks," *in European Conference on Computer Vision* (**ECCV**) 2016.

C7. **R. Zhao**, W. Ouyang, H, Li and X. Wang, "Saliency Detection by Multi-Context Deep Learning," *in IEEE International Conference on Computer Vision and Pattern Recognition* (**CVPR**) 2015.

C6. **R. Zhao**, W. Ouyang and X. Wang, "Learning Mid-level Filters for Person Re-Identfiation," *in IEEE International Conference on Computer Vision and Pattern Recognition* (**CVPR**) 2014.

C5. W. Li, **R. Zhao**, T. Xiao and X. Wang, "DeepReid: Deep Filter Pairing Neural Network for Person Re-Identification," *in IEEE International Conference on Computer Vision and Pattern Recognition* (**CVPR**) 2014.

C4. **R. Zhao**, W. Ouyang and X. Wang, "Person Re-Identification by Salience Matching," *in IEEE International Conference on Computer Vision* (**ICCV**) 2013.

C3. **R. Zhao**, W. Ouyang and X. Wang, "Unsupervised Salience Learning for Person Re-Identification," *in IEEE International Conference on Computer Vision and Pattern Recognition* (**CVPR**) 2013.

C2. W. Li, **R. Zhao**, and X. Wang, "Human Reidentification with Transferred Metric Learning," *in Asian Conference on Computer Vision* (**ACCV**) 2012.

C1. L. Zhuang, **R. Zhao**, N. Yu and B. Liu, "SVD Based Linear Filtering in DCT Domain," *in IEEE International Conference on Image Processing* (**ICIP**) 2010.

Posters

P2. **R. Zhao**, W. Ouyang and X. Wang, "Unsupervised Salience Learning for Person Re-Identification," *in the 10th ACM-HK Student Research and Career Day (***SRCDAY***)*, November 19th, 2013.

P1. **R. Zhao**, W. Ouyang and X. Wang, "Person Re-Identification by Salience Matching," *in the 10th ACM-HK Student Research and Career Day (***SRCDAY***)*, November 19th, 2013.

Technical Skills

- Computer Languages: Python, Matlab, C/C++, JavaScript , HTML, CSS, LaTeX

- Productivity Tools: Matlab, Microsoft Visual Studio, Netbeans, Vim, Sublime, Git, SVN
- Python Experience: Numpy, Scipy, Pandas, PyQt, Scikit-learn, Scikit-image, Theano, Pylearn2
- Matlab Experience: Linear algebra, numeric computing, vectorization, parallel computing, CVX optimization, image segmentation, visual feature extraction, visualization
- Operating Systems: Unix/Linux, OS X, Windows

Professional Activities

- Member, IEEE
- Member, the Computer Vision Foundation (CVF)
- Student Volunteer, IEEE International Conference on Image Processing (ICIP), 2010
- Reviewer of
  - IEEE Transaction on Image Processing (TIP)
  - IEEE Transaction on Intelligent Transportation Systems (TITS)
  - IEEE Transaction on Circuits and Systems for Video Technology (TCSVT)
  - IEEE Transaction on Neural Network and Learning System (TNNLS)
  - IEEE Signal Processing Letters (SPL)
  - Elsevier Journal of Neurocomputing (NEUCOM)
  - Elsevier Journal of Image and Vision Computing (IMAVIS)
  - Elsevier Journal of Visual Communication and Image Representation Registration (JVCI)
  - Springer Journal of Machine Vision and Applications (MVA)
  - Springer Book "Person Re-identification", 2014
  - IEEE International Conference on Computer Vision and Pattern Recognition (CVPR), 2015-2018
  - ACCV Workshop on Deep Learning on Visual Data (DLVD), 2014
- Program Committee Member of
  - The Association for the Advancement of Artificial Intelligence (AAAI), 2017,2018
  - IEEE International Conference on Multimedia Big Data (BigMM), 2015
  - Asian Conference on Computer Vision (ACCV), 2014,2016,2018
  - ACCV Workshop on Deep Learning on Visual Data (DLVD), 2014

References

- Xiaoou Tang   Founder, SenseTime Group Limited
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