Zhisheng Zhong

Ph.D Candidate

The University of Tokyo
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Education

The University of Tokyo, Tokyo, Japan Sep. 2019 - present

Ph.D candidate, Supervisors: Kiyoharu Aizawa

Peking University, Beijing, China

M.S. in Computer Science, Supervisors: Zhouchen Lin and Chao Zhang

Beijing University of Posts and Telecommunications, Beijing, China

B.E. in Telecommunication Engineering, GPA: 89/100, Ranking: Top-3%

Sep. 2012 - Jul. 2016

Sep. 2016 - Jul. 2019

Research Interests

- **DL** Deep network architecture, efficient and lightweight network.
- CV Low-level vision, cross-modal retrieval and semantic segmentation.

Publications

Frist Author

- [1] Shupeng Su*, **Zhisheng Zhong***, Chao Zhang. "Deep Joint-semantics Reconstructing Hashing for Large-scale Unsupervised Cross-modal Retrieval". *International Conference on Computer Vision* (*ICCV*), 2019. * indicates equal contribution, Oral, Top-4.3%.
- [2] Zhisheng Zhong, Fangyin Wei, Zhouchen Lin, Chao Zhang. "ADA-Tucker: Compressing Deep Neural Networks via Adaptive Dimension Adjustment Tucker Decomposition". *Elsevier, Neural Networks (NN)*, 2019. 5-Year Impact Factor: 6.864. [pdf]
- [3] Zhisheng Zhong, Tiancheng Shen, Yibo Yang, Chao Zhang, Zhouchen Lin. "Joint Sub-bands Learning with Clique Structures for Wavelet Domain Super-Resolution". *Neural Information Processing Systems (NIPS)*, 2018. [pdf]
- [4] **Zhisheng Zhong**, Yong Sun, Yue Wang, et al. "An Improved Collaborative Filtering Recommendation Algorithm not Based on Item Rating". *International Conference on Cognitive Informatics & Cognitive Computing (ICCI*CC)*, 2015. Undergraduate period. [pdf]

• Joint Author

- [1] Xia Li, **Zhisheng Zhong**, Jianlong Wu, Yibo Yang, Zhouchen Lin, Hong Liu. "Expectation Maximization Attention Networks for Semantic Segmentation". *International Conference on Computer Vision (ICCV)*, 2019. **Oral, Top-4.3%**. [pdf] and [code]
- [2] Xingyu Xie, Jianlong Wu, **Zhisheng Zhong**, Guangcan Liu, Zhouchen Lin. "Differentiable Linearized ADMM". *International Conference on Machine Learning (ICML)*, 2019. [pdf] and [code]
- [3] Tiancheng Shen, Xia Li, **Zhisheng Zhong**, Jianlong Wu, Zhouchen Lin. "R²Net Recurrent and Recursive Network for Sparse View CT Artifacts Removal". *Medical Image Computing and Computer Assisted Interventions (MICCAI)*, 2019.
- [4] Yibo Yang, **Zhisheng Zhong**, Tiancheng Shen, Zhouchen Lin. "Convolutional Neural Networks with Alternately Updated Clique". *Computer Vision and Pattern Recognition (CVPR)*, 2018. **Oral, Top-2.3%**. [pdf] and [code]

Patents

- [1] Zhouchen Lin, **Zhisheng Zhong**, et al. "Joint Sub-bands Learning with Clique Structures for Wavelet Domain Super-Resolution". Chinese Patent No.: 201811007566.1.
- [2] Zhouchen Lin, **Zhisheng Zhong**, et al. "A DNN Compression Method Based on Adaptive Dimension Adjustment Tucker Decomposition". Chinese Patent No.: 201710623220.3.

Honors & Awards

- 2019 Monbukagakusho (MEXT) Scholarship, University of Tokyo, University recomendation
- 2019 Qualcomm Scholarship (¥ 32,0000 JPY), Peking University (Top-2%)
- 2019 Excellent Graduate, Peking University (Top-10%)
- 2018 Bao Steel Education Scholarship (¥ 16,0000 JPY), Peking University (Top-5%)
- 2018 **Merit Student**, Peking University (Top-5%)
- 2016 Third Prize, National Graduate Contest on Smart-city Technology and Creative Design, China
- 2016 Excellent Graduate, Beijing (Top-5%)
- 2015 Honorable Prize, Mathematical modeling competition for American college students, USA
- 2014 Merit Student, Beijing University of Posts and Telecommunications (Top-5%)
- 2014 National Encouragement Scholarship, Beijing University of Posts and Telecommunications
- 2013 Merit Student, Beijing University of Posts and Telecommunications (Top-5%)
- 2013 National Encouragement Scholarship, Beijing University of Posts and Telecommunications
- 2013 First Prize, Beijing undergraduate physics competition, Beijing (Top-10%)
- 2013 First Prize, Beijing undergraduate mathematics competition, Beijing (Top-10%)

Experiences

Research Intern, Microsoft Research Asia, Beijing, China

Mar. 2018 - May. 2018

We design compacted CNN models with different-scales to detect face key points on Widerface.

Visiting Scholar in Statistic, Florida State University, Florida, USANov. 2017 - Feb. 2018 Supervisor: **Yiyuan She**, we propose an optimization-based inherent clustering framework.

Skills

Language Chinese: native; English: fluent, TOEFL (85)

Programming Experienced in Python, MATLAB, C/C++, LATEX

Libraries Experienced in Pytorch, Keras, familiar with TensorFlow, Caffe, Scikit-learn

Courseworks

- **M.S.** Pattern Recognition, Machine Learning, Deep Learning, Computer Vision, Digital Image Processing, Convex Optimization.
- **B.E.** Calculus, Probability Theory, Linear Algebra, Information Theory, Principles of Communications, Digital Signal Processing, C++ Programming, Data Structures and Algorithm Design.