



Peng Zhao Ph.D.

+86 18782945984
pengzhao@cqmu.edu.cn

No. 1, Yixueyuan
Road, Yuzhong
District, Chongqing
400016, P.R.China

Peng Zhao

Postdoctoral in basic medicine

About me I am a postdoctoral researcher in basic medicine at Chongqing Medical University. My advisor is Prof. Bo Wen from Fudan University. I got my Ph.D. in School of Computer Science and Technology, University of Electronic Science and Technology of China (UESTC). During my doctoral study, As a visiting student, I went to Indiana University School of Medicine in the United States for a year with the support of China Scholarship Council.

Research Interests

- **Artificial Intelligence Theory:**
Research on machine learning, deep learning methods and algorithms such as matrix decomposition, tensor decomposition, sparse representation learning, transfer learning, and Contrastive Learning.
- **Bioinformatics:**
Research on the application of machine learning algorithms to genetic data, epigenetic data analysis, etc. Current research work focuses on single-cell sequencing data for early detection and diagnosis of tumors.
- **Intersection of medicine and engineering:**
Aiming at the deep mining of medical data such as pathology images and electronic medical records, we are expanding new ways in medical-industrial crossover accurate diagnosis to help clinical diagnosis and clinical decision-making.

Work History

2022.09 - Current

ChongQing Medical University (CQMU)

- Postdoctor in Bioinformatics (Advisor: Prof. Bo Wen)

2021.12 - 2022.06

Shenzhen Research Institute, The Chinese University of Hong Kong (SZRI)

- *Intern* in Computer Science (Mentor: Prof. Irwin King)

2018.11 – 2019.12

Indiana University School of Medicine (IUSM)

- *Visiting Student* in Machine Learning and Computational Biology (Advisor: Prof. Kun Huang)

Education

2016.09 - 2022.06

University of Electronic Science and Technology of China (UESTC)

- Ph.D. in Computer Science and Technology (Advisor: Prof. Zenglin Xu)

2014.09 - 2016.06

University of Electronic Science and Technology of China (UESTC)

- M.Sc. in Electronics and Communication Engineering (MD-PHD)

2010.09 - 2014.06

Sichuan Normal University (SICNU)

- B.Sc. in Mathematics and Applied Mathematics

Publications

1. **Peng Zhao**, Zenglin Xu, Junjie Chen, Yazhou Ren, and Irwin King. Single Cell Self-Paced Clustering with Transcriptome Sequencing Data. International Journal of Molecular Sciences, 2022. (SCI)
2. **Peng Zhao**, Hongjie Wu, Shudong Huang. Multi-view Graph Clustering by Adaptive Manifold Learning[J]. Mathematics, 2022. (SCI)
3. **Peng Zhao**, Yongpan Sheng, Xiaohui Zhan. An advanced NMF-based approach for single cell data clustering[C]. Proceedings of 2022 2nd IEEE International Conference on Information Communication and Software Engineering, 2022.
4. **Peng Zhao**^{*}, Wenhua Zang^{*}, Bin Liu, Zhao Kang, Kun Bai, Kaizhu Huang, and Zenglin Xu. Domain Adaptation with Feature and Label Adversarial Networks. Neurocomputing, 2020. (SCI)
5. Yazhou Ren, **Peng Zhao**, Yongpan Sheng, Dezhong Yao, and Zenglin Xu. Robust Softmax Regression for Multi-class Classification with Self-Paced Learning, In Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI), 2017. (CCF A, The first author was my mentor.)
6. Fen Chen, **Peng Zhao**, Ting Feng Tang, and Yan Zhou . Fast Low-Rank Decomposition Model-Based Hyperspectral Image Classification Method[J]. IEEE Geoscience and Remote Sensing Letters, 2017, 14(2): 169-173. (SCI, The first author was my mentor.)
7. Yazhou Ren, **Peng Zhao**, Zenglin Xu, and Dezhong Yao. Balanced self-paced learning with feature corruption. In Proceedings of the International Joint Conference on Neural Networks (IJCNN) pages 2064–2071, 2017. (CCF C, The first author was my mentor.)
8. Shudong Huang, **Peng Zhao**, Yazhou Ren, Tianrui Li, Zenglin Xu. Self-paced and Soft-weighted NMF for Data Representation. Knowledge-Based Systems, 2019. (SCI)
9. Yazhou Ren, Shudong Huang, **Peng Zhao**, Zenglin Xu. Self-paced and Auto-weighted Multi-view Clustering. Neurocomputing, 2020. (SCI)
10. Fen Chen, Sijia Lu, **Peng Zhao**, Tim Van de Voorde, and Wenbo Xu. Urban Land Cover Mapping from Airborne Hyperspectral Imagery Using a Fast Jointly Sparse Spectral Mixture Analysis Method. Canadian Journal of Remote Sensing, 2020. (SCI)
11. Fangfei Lin, Bing Bai, Kun Bai, Yazhou Ren, **Peng Zhao**, Zenglin Xu. Contrastive Multi-view Hyperbolic Hierarchical Clustering. IJCAI 2022. (CCF A)
12. Wei Wei, Zhenting Huang, Bo Ye, Xiaoling Mu, Jing Qiao, **Peng Zhao**, Yuehang Jiang, Jingxian Wu and Xiaohui Zhan. Prediction of prognosis, immunotherapy and chemotherapy with an immune-related risk score model in endometrial cancer. International Conference on Intelligent Biology and Medicine (ICIBM 2023).

Awards and Honors

- China Scholarship Council Scholarship, 2018
- First-class scholarship for postgraduate students in UESTC, 2017
- The second prize of China Undergraduate Mathematical Contest in Modeling, 2012

Professional Services

Reviewer for:

- The 31st AAAI Conference on Artificial Intelligence (AAAI-17)
- SSCI 16 CCF Big data 16/17 CCPR 16

Teaching Assistant

- Machine Learning (for M.Sc. students), Fall, 2017
- Advanced Language Programme Design (for B.Sc. students), Fall, 2015
- Mathematical Modeling (for B.Sc. students), Spring, 2013

Skills

Proficient at C, Python, MATLAB, LaTeX.