Binhui Xie

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EDUCATION

- **Beijing Institute of Technology**
  Ph.D. Student in School of Computer Science and Technology, Advisor: Prof. Shuang Li
  Beijing, China
  Sep. 2019 - Present

- **Beijing Institute of Technology**
  B.Eng. in Software Engineering, GPA: 3.5/4.0
  Beijing, China
  Sep. 2015 - Jul. 2019

RESEARCH INTERESTS

My research interests are in foundation models, transfer learning, and data-efficient learning.

PUBLICATIONS (*co-first author)

1. **Binhui Xie**, Shuang Li, Mingjia Li, Chi Harold Liu, Gao Huang, and Guoren Wang. SePiCo: Semantic-Guided Pixel Contrast for Domain Adaptive Semantic Segmentation, *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2023. **IF: 24.31**

2. Yuxin Fang, Wen Wang, **Binhui Xie**, Quan Sun, Ledell Yu Wu, Xinggang Wang, Tiejun Huang, Xinlong Wang, and Yue Cao. EVA: Exploring the Limits of Masked Visual Representation Learning at Scale, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023, Vancouver, Canada.

3. Mingjia Li*, **Binhui Xie***, Shuang Li, Chi Harold Liu, Xinjing Cheng. VBLC: Visibility Boosting and Logit-Constraint Learning for Domain Adaptive Semantic Segmentation under Adverse Conditions, *AAAI Conference on Artificial Intelligence (AAAI)*, 2023, Washington, DC, USA. **Oral Presentation**

4. **Binhui Xie**, Longhui Yuan, Shuang Li, Chi Harold Liu and Xinjing Cheng. Towards Fewer Annotations: Active Learning via Region Impurity and Prediction Uncertainty for Domain Adaptive Semantic Segmentation, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2022, New Orleans, Louisiana, USA. **Oral Presentation**

5. **Binhui Xie**, Longhui Yuan, Shuang Li, Chi Harold Liu, Xinjing Cheng, and Guoren Wang. Active Learning for Domain Adaptation: An Energy-based Approach, *AAAI Conference on Artificial Intelligence (AAAI)*, 2022, Virtual Conference.

6. **Binhui Xie**, Shuang Li, Fangrui Lv, Chi Harold Liu, Guoren Wang, and Dapeng Wu. A Collaborative Alignment Framework of Transferable Knowledge Extraction for Unsupervised Domain Adaptation, *IEEE Transactions on Knowledge and Engineering (TKDE)*, 2022.

7. Shuang Li, **Binhui Xie**, Qiuxia Lin, Chi Harold Liu, Gao Huang, and Guoren Wang. Generalized Domain Conditioned Network, *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 44(8): 4093-4109 (2022). **IF: 24.31**

8. Shuang Li, Kaixiong Gong, **Binhui Xie**, Chi Harold Liu, Weipeng Cao, and Song Tian. Critical Classes and Samples Discovering for Partial Domain Adaptation, *IEEE Transactions on Cybernetics (TCYB)*, 2022.

9. Jiashu Wu, Yang Wang, **Binhui Xie**, Shuang Li, Hao Dai, Kejiang Ye, and Chengzhong Xu. Joint Semantic Transfer Network for IoT Intrusion Detection, *IEEE Internet of Things Journal (IoT)*, 2022.

10. Shuang Li, Fangrui Lv, **Binhui Xie**, Chi Harold Liu, Jian Liang, and Chen Qin. Bi-Classifier Determinacy Maximization for Unsupervised Domain Adaptation, *AAAI Conference on Artificial Intelligence (AAAI)*, 2021, Virtual Conference.

11. Shuang Li, **Binhui Xie**, Jiashu Wu, Ying Zhao, Chi Harold Liu, and Zhengming Ding. Simultaneous Semantic Alignment Network for Heterogeneous Domain Adaptation, *ACM Multimedia (MM)*, 2020, Virtual Conference.

12. Shuang Li, Chi Harold Liu, Qiuxia Lin, **Binhui Xie**, Zhengming Ding, Gao Huang, and Jian Tang. Domain Conditioned Adaptation Network, *AAAI Conference on Artificial Intelligence (AAAI)*, 2020, New York, NY, USA.

13. Shuang Li, Chi Harold Liu, Limin Su, **Binhui Xie**, Zhengming Ding, C. L. Philip Chen, Dapeng Wu. Discriminative Transfer Feature and Label Consistency for Cross-Domain Image Classification, *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, 31(11): 4842-4856 (2020).

14. Shuang Li, Chi Harold Liu, **Binhui Xie**, Limin Su, Zhengming Ding, and Gao Huang. Joint Adversarial Domain Adaptation, *ACM Multimedia (MM)*, 2019, Nice, France.

Technical Reports

- **Binhui Xie**, Kejia Yin, Shuang Li, and Xinjing Chen. SPCL: A New Framework for Domain Adaptive Semantic Segmentation via Semantic Prototype-based Contrastive Learning, arXiv:2111.12358.

- Shuang Li, **Binhui Xie**, Bin Zang, Chi Harold Liu, Xinjing Cheng, Ruigang Yang, and Guoren Wang. Semantic Distribution-aware Contrastive Adaptation for Semantic Segmentation, arXiv:2105.05013.

ACADEMIC SERVICES

- **Organizer** of Workshop: VALSE 2022 (Student Workshop).

- **Reviewer** for ICCV'23, CVPR'23, ICLR'23, AAAI'23, ECCV'22, CVPR'22, AAAI'22, ICCV'21, CVPR'21, AAAI'21 etc.

- **Reviewer** for TPAMI, TNNLS, TMM, etc.

HONORS

- **Excellent Undergraduate**, Beijing Institute of Technology, 2019.

INVITED TALKS

- 2023.3, **VALSE**, Data-Efficient Semantic Segmentation.
- 2022.6, **ReadPaper**, Towards Fewer Annotations: Active Learning for Adaptive Semantic Segmentation.
- 2022.6, **Synced**, Towards Fewer Annotations: Active Learning for Adaptive Semantic Segmentation.
- 2022.5, **Zhidx Course**, Domain Adaptation meets Active Learning.
- 2022.03, **AI Drive**, Energy-based Active Domain Adaptation.
- 2021.10, **VALSE**, Generalized Domain Conditioned Adaptation Network.