Taotao Jing

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[Google Scholar] [DBLP] [Home Page] [Research Gate] [LinkedIn] [Github]

EDUCATION

School of Science & Engineering | Tulane University — New Orleans, USA
Ph.D. student in Computer Science — Dec. 2020 - Present
Purdue School of Engineering & Technology | Purdue University — Indianapolis, USA
Ph.D. student in Electrical and Computer Engineering — Jan. 2018 - Dec. 2020
Department of Electrical & Computer Engineering | Northeastern University — Boston, USA
M.S. in Computer System Engineering — Sep. 2016 - May 2018
Department of Electronic and Information Engineering | Xi'an Jiaotong University — Xi'an, China
B.S. in Electronic Science and Technology — Sep. 2012 - Jul. 2016

RESEARCH PROJECTS

Marginalized Augmented Few-shot Domain Adaptation — May 2020 - Dec. 2020
Research Assistant | Purdue University, Indianapolis, USA — Supervisor: *Prof.* Zhengming Allan Ding

- Proposed a two-pronged data augmentation strategy to address the challenges resulting from scarcity of training data
- Provided theoretical analysis and efficient implementation strategy of the proposed method
- Achieved state-of-the-art performance on several popular few-shot domain adaptation visual benchmarks

Adaptively-Accumulated Knowledge Transfer for Partial Domain Adaptation — Jan. 2020 - Apr. 2020
Research Assistant | Purdue University, Indianapolis, USA — Supervisor: *Prof.* Zhengming Allan Ding

- Presented a dual distinct classifier model to align cross-domain distribution and task-specific decision boundaries
- Proposed a source-guided adaptively-accumulated learning strategy to facilitate cross-domain knowledge
- Achieved state-of-the-art performance on several commonly used partial domain adaptation tasks

Towards Fair Knowledge Transfer for Imbalanced Domain Adaptation — Sep. 2019 - Jan. 2020
Research Assistant | Purdue University, Indianapolis, USA — Supervisor: *Prof.* Zhengming Allan Ding

- Exploited a generative data augmentation framework to handle fairness challenges in domain adaptation tasks
- Designed a novel cross-domain few-shot learning experiment settings to evaluate the cross-domain fairness transfer
- Produced new state-of-the-art on several popular benchmarks under the cross-domain few-shot learning settings

Adversarial Dual Distinct Classifier for Unsupervised Domain Adaptation — Mar. 2019 - Jun. 2019
Research Assistant | Purdue University, Indianapolis, USA — Supervisor: *Prof.* Zhengming Allan Ding

- Exploited dual task-specific classifiers architecture to align cross-domain distribution and decision boundaries
- Proposed a novel discriminative cross-domain alignment loss and importance guided optimization strategy to mitigate the cross-domain mismatching and learn the domain-invariant embedding features across domains
- Created new state-of-the-art on several cross-domain visual unsupervised domain adaptation benchmarks

EV-Action: Electromyography-Vision Multi-Modal Action Dataset — Jan. 2018 - Jul. 2018
Research Assistant | SMILE Lab, NEU, Boston, USA — Supervisor: *Prof.* Yun Raymond Fu

- Collected and introduced the first, large-scale EV-Action dataset consisting of RGB, depth, electromyography, and two skeleton modalities for human action recognition tasks including over 7,000 samples from 70 human subjects
- Proposed an effective framework for EMG-based action recognition and reported the state-of-the-art performance

PUBLICATIONS & PREPRINTS

- **Taotao Jing,** and Zhengming Ding. "Adversarial Dual Distinct Classifiers for Unsupervised Domain Adaptation." *Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision* **(WACV),** 2020
- **Taotao Jing,** Haifen Xia, and Zhengming Ding, "Adaptively-Accumulated Knowledge Transfer for Partial Domain Adaptation." *ACM International Conference on Multimedia* (**MM**), 2020
- Lichen Wang, Bin Sun, Joseph Robinson, **Taotao Jing**, and Yun Fu. "EV-Action: Electromyography-Vision Multi-Modal Action Dataset." *IEEE International Conference on Automatic Face and Gesture Recognition* **(FG)**, 2020
- ◊ **Taotao Jing,** Ming Shao, and Zhengming Ding. "Discriminative Cross-Domain Feature Learning for Partial Domain Adaptation." arXiv preprint, 2020
- ◊ **Taotao Jing,** Bingrong Xu, Jingjing Li, and Zhengming Ding. "Towards Fair Knowledge Transfer for Imbalanced Domain Adaptation." arXiv preprint, 2020

TECHNICAL SKILLS

Machine Learning: PyTorch, TensorFlow, Python, MATLAB, Keras
Programming: Java, MySQL, MongoDB, JavaScript, Shell, Spring MVC, HTML, AngularJS, CSS, Git, LaTeX, Linux