Taotao Jing

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EDUCATION

LD CHITOIT	
School of Science & Engineering Tulane University	New Orleans, USA
Ph.D. student in Computer Science	Jan. 2021 - 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

Towards Novel Target Discovery Through Open-Set Domain Adaptation

Nov. 2020 - Mar. 2021

Research Assistant | Tulane University, New Orleans, USA

Proposed a challenging but practical task as understanding the unknown categories in the open-set tasks

Designed an effective framework to identify seeing categories and recover semantic attributes for unseen categories

• Constructed two cross-domain open-set recognition and semantic recovery benchmarks to evaluate the framework

Adaptively-Accumulated Knowledge Transfer for Partial Domain Adaptation

Jan. 2020 - Apr. 2020

Research Assistant | Purdue University, Indianapolis, USA

Supervisor: *Prof.* Zhengming Allan Ding

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- 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 to evaluate the cross-domain fairness transfer framework
- 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,** Bingrong Xu, Jingjing Li, and Zhengming Ding. "Towards Fair Knowledge Transfer for Imbalanced Domain Adaptation." arXiv preprint, 2020
- ♦ **Taotao Jing,** Hongfu Liu, and Zhengming Ding. "Towards Novel Target Discovery Through Open-Set Domain Adaptation." arXiv preprint, 2021

TECHNICAL SKILLS

Machine Learning: PyTorch, TensorFlow, Python, MATLAB, Keras

Programming: Java, MySQL, MongoDB, JavaScript, Shell, Spring MVC, HTML, AngularJS, CSS, Git, LaTeX, Linux