Shih-Yen Tao

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🌐 jakesabathia.github.io

Research Interests

Machine Learning, Computer Vision, Natural Language Processing

Education

Carnegie Mellon University, Pittsburg, PA, USA   *Aug. 2017 -*

- M.S. in Computer Science - Language Technology Institution

National Taiwan University, Taipei, Taiwan   *Sept. 2012 - Present*

- B.S. in Electrical Engineering (Overall GPA: 4.08/4.3)
- Relevant Courses (*graduate-level courses):
  Convex Optimization*, Mathematical Statistics for Data Science*, Machine Learning*, Artificial Intelligence*, Algorithms, Data Structure and Programming

Research Experiences

Multimedia and Machine Learning Lab, *Academia Sinica, Taipei, Taiwan*

- **Research Assistant**   *Feb. 2015 - Feb. 2017*
  - Zero-Shot Learning for Fine-Grained Image Classification [1]
    Proposed a model to match visual and semantic concepts via semantics-preserving locality embedding.
  - Domain Adaptation for Object Recognition and Cross-Lingual Text Categorization [2]
    Proposed to learn a domain-invariant latent space by matching cross-domain data distributions.
  - *Advisor: Dr. Yu-Chiang Frank Wang*

Speech Processing Lab, *National Taiwan University, Taipei, Taiwan*

- **Undergrad Research Assistant**   *Sept. 2015 - Feb. 2017*
  - Working on deep domain adaptation for key terms extraction via Attention-Based LSTM network.
  - Built a Massive Open Online Courses learning map[1] by considering lecture similarities and prerequisites.
  - *Advisor: Prof. Lin-Shan Lee*

Publications

[1] **Shih-Yen Tao**, Yi-Ren Yeh, Yao-Hung Hubert Tsai, and Yu-Chiang Frank Wang.
"Semantics-Preserving Locality Embedding for Zero-Shot Learning", in *BMVC 2017*. [PDF] [Suppl.] [Code]

[2] **Shih-Yen Tao***, Yuan-Ting Hsieh*, Yao-Hung Hubert Tsai, Yi-Ren Yeh and Yu-Chiang Frank Wang.
"Recognizing Heterogeneous Cross-Domain Data via Generalized Joint Distribution Adaptation",
in *ICME 2016* (**Oral Presentation**). (*equal contributions) [PDF] [Code] [Talk] [Slide]

Academic Services

Reviewer:

- CVPR 2017, AAAI 2017

Skills

Programming Languages: Python (proficient), MATLAB (proficient), C++, C#, Java
Tools: Tensorflow (proficient), Keras (proficient), Kaldi, LaTeX, Unity

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[1]Structuring Lectures in Massive Open Online Courses (MOOCs) for Efficient Learning by Linking Similar Sections and Predicting Prerequisites (Shen *et al.*, *INTERSPEECH 2015*)