

Shih-Yen Tao

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🐙 [jakesabathia.github.io](https://github.com/jakesabathia)

Research Interests

Machine Learning, Computer Vision, Natural Language Processing, Optimization

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 map¹ 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*. (Camera Ready Version Coming Soon) [\[PDF\]](#) [\[Suppl.\]](#) [\[Code\]](#)
- [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, L^AT_EX, Unity

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