

# Shih-Yen Tao

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

## Research Interests

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Machine Learning, Computer Vision, Natural Language Processing

## Education

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**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

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**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<sup>1</sup> by considering lecture similarities and prerequisites.
  - *Advisor: Prof. Lin-Shan Lee*

## Publications

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- [1] **Shih-Yen Tao**, Yao-Hung Hubert Tsai, Yi-Ren Yeh 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

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**Reviewer:**

- CVPR 2017, AAAI 2017

## Skills

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**Programming Languages:** Python (proficient), MATLAB (proficient), C++, C#, Java

**Tools:** Tensorflow (proficient), Keras (proficient), Kaldi, L<sup>A</sup>T<sub>E</sub>X, Unity

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