

Shih-Yen Tao

✉ b01901055@ntu.edu.tw ☎ +886-982-812-534

○ #17 Lane 175, Wuling Rd., 13th Fl., Apt. 3, Hsinchu, Taiwan, (R.O.C.) 300

🌐 jakesabathia.github.io

Research Interests

Deep Learning, Machine Learning, Computer Vision, Natural Language Processing

Education

National Taiwan University, B.S. in Electrical Engineering

Sept. 2012 - Present

- Overall GPA: 4.08/4.3
- Presidential Award (awarded to students with top 5% GPA for that semester) in *Spring 2013*
- Relevant Courses (*graduate-level courses):
*Mathematical Statistics for Data Science**, *Topics in Machine Learning**, *Machine Learning**, *Artificial Intelligence**, *Probability and Statistics*, *Algorithms*, *Data Structure and Programming*

Research Experiences

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

- **Research Assistant** *Feb. 2015 - Present*
 - Deep Multimodal Embedding for Zero-Shot Learning
Combining autoencoders with a multi-class contrastive loss layer to bridge multimodal data.
 - Zero-Shot Learning for 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 - Present*
 - 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.
 - Constructed a Hidden-Markov-Model Chinese speech recognition system with Kaldi in bash script.
 - *Advisor: Prof. Lin-Shan Lee*

Networking and Multimedia Lab, *National Taiwan University, Taipei, Taiwan*

- **Undergrad Student** *Feb. 2015 - June 2015*
 - Used Azure machine learning APIs to develop an automated reporting system for dementia sufferers.
 - Developed a network game: 3D Pikachu Volleyball for Android using Unity game engine.
 - *Advisor: Prof. Tsung-Nan Lin*

Publications

- [1] **Shih-Yen Tao**, Yao-Hung Hubert Tsai, Yi-Ren Yeh, and Yu-Chiang Frank Wang.
“*****”, **submitted to CVPR 2017**.
- [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) [\[PDF\]](#) [\[Code\]](#) [\[Talk\]](#) [\[Slide\]](#)

Skills & Test Scores

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

Languages: Mandarin Chinese (native), English (fluent)

Tools: Tensorflow (proficient), Keras (proficient), Kaldi, L^AT_EX, Unity

TOEFL iBT: 104/120 (Reading 29, Listening 26, Speaking 23, Writing 26)

GRE: Verbal (157/170), Quantitative (170/170), Analytical Writing (3.0/6.0)

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