Yao-Hung (Hubert) Tsai

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Research Interests

I work on Deep Learning and its applications.

Education

Carnegie Mellon University, Pittsburgh, PA, USA   *Aug 2016 - May 2021*

- Ph.D. in Machine Learning within School of Computer Science
- *Advised by Dr. Ruslan Salakhutdinov*
- GPA: 4.15/4.0

National Taiwan University, Taipei, Taiwan   *Aug 2010 - Jun 2014*

- B.S. in Electrical Engineering (graduated with Department Honors)
- Undergraduate Ceremony Representative
- *Advised by Dr. Yu-Chiang Frank Wang and Dr. Shao-Yi Chien*
- GPA: 4.17/4.0

Selected Publications

Conference Publications

[1] Shih-Yen Tao, **Yao-Hung Hubert Tsai**, Yi-Ren Yeh and Yu-Chiang Frank Wang. "Semantics-Preserving Locality Embedding for Zero-Shot Learning", *British Machine Vision Conference (BMVC)*, 2017.

[2] Wei-Yu Chen, Tzu-Ming Harry Hsu, **Yao-Hung Hubert Tsai**, Yu-Chiang Frank Wang and Ming-Syan Chen. "Transfer Neural Trees for Heterogeneous Domain Adaptation", *European Conference on Computer Vision (ECCV)*, 2016.

[3] **Yao-Hung Hubert Tsai**, Yi-Ren Yeh and Yu-Chiang Frank Wang. "Learning Cross-Domain Landmarks for Heterogeneous Domain Adaptation", *Computer Vision and Pattern Recognition (CVPR)*, 2016.

[4] **Yao-Hung Hubert Tsai**, Cheng-An Hou, Wei-Yu Chen, Yi-Ren Yeh and Yu-Chiang Frank Wang. "Domain-Constraint Transfer Coding for Imbalanced Unsupervised Domain Adaptation", *Association for the Advancement of Artificial Intelligence (AAAI)*, 2016.

[5] Tzu-Ming Harry Hsu, Wei-Yu Chen, Cheng-An Hou, **Yao-Hung Hubert Tsai**, Yi-Ren Yeh and Yu-Chiang Frank Wang. "Unsupervised Domain Adaptation with Imbalanced Cross-Domain Data", *International Conference on Computer Vision (ICCV)*, 2015.

[6] Yuan-Ting Hsieh*, Shih-Yen Tao*, **Yao-Hung Hubert Tsai**, Yi-Ren Yeh and Yu-Chiang Frank Wang. "Generalized Joint Distribution Adaptation on Heterogeneous Feature Space", *International Conference on Multimedia & Expo (ICME)*, 2016. (*equal contributions) **(Oral Presentation)**

[7] **Yao-Hung Hubert Tsai**, Yi-Ren Yeh and Yu-Chiang Frank Wang. "Heterogeneous Domain Adaptation with Label and Structure Consistency", *International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2016.

[8] **Yao-Hung Tsai***, Hung-Ming Hsu*, Cheng-An Hou and Yu-Chiang Frank Wang. "Person-specific Domain Adaptation with Applications to Heterogeneous Face Recognition", *International Conference on Image Processing (ICIP)*, 2014. (*equal contributions)

[9] Po-Chen Wu, **Yao-Hung Tsai** and Shao-Yi Chien. "Stable Pose Tracking from a Planar Target with an Analytical Motion Model in Real-time Applications", *International Workshop on Multimedia Signal Processing (MMSP)*, 2014.

Journal Publications

[10] Cheng-An Hou, **Yao-Hung Hubert Tsai**, Yi-Ren Yeh and Yu-Chiang Frank Wang. "Unsupervised Domain Adaptation with Label and Structural Consistency", *IEEE Transactions on Image Processing (TIP)*, 2016.

Pre-Prints

[11] Chih-Kuan Yeh, **Yao-Hung Hubert Tsai**, Yu-Chiang Frank Wang. "Generative-Discriminative Variational Model for Visual Recognition", *arXiv:1706.02295*, 2017.

[12] **Yao-Hung Hubert Tsai**, Liang-Kang Huang, Ruslan Salakhutdinov. "Learning Robust Visual-Semantic Embeddings", *arXiv:1703.05908*, 2017.

RESEARCH EXPERIENCES

Graduate Research Assistant, Carnegie Mellon University   *Aug 2016 - May 2021*
- Researching in Deep Learning and its applications
- *Advisor: Dr. Ruslan Salakhutdinov*

Graduate Research Intern, Microsoft Research   *May 2017 - Aug 2017*
- Working on deep generative models
- *Advisor: Dr. Nebojsa Jojic*

Research Assistant, CITI, Academia Sinica   *Aug 2015 - Aug 2016*
- Working on projects for person re-identification, domain adaptation, and transfer learning
- *Advisor: Dr. Yu-Chiang Frank Wang*

Undergraduate Research Assistant, National Taiwan University   *Sep 2012 - Jun 2014*
- Working on projects for heterogeneous face recognition, augmented reality, and real-time pose tracking
- *Advisor: Dr. Yu-Chiang Frank Wang and Dr. Shao-Yi Chien*

TEACHING EXPERIENCES

Teaching Assistant, CITI, Academia Sinica   *Aug 2015 - Aug 2016*
- Providing Deep Learning tutorials/short courses for undergrad/grad students

ACADEMIC TALKS

[1] **Yao-Hung Hubert Tsai** "Learning Visual and Semantic Embeddings for Low-Shot Setting", *Taiwanese Computer Vision Online Meetup*, May 2017.

ACADEMIC SERVICES

Reviewer:
- ICML 2017, NIPS 2017

SELECTED HONORS & AWARDS

Government Scholarship to Study Abroad (GSSA), Taiwan Ministry of Education	*2016/2017*
Undergraduate Ceremony Representative, National Taiwan University	*2014*
Presidential Awards, National Taiwan University	*2011/2012/2014*
Best Tourism App Award, Chunghwa Telecom Hami Apps Competition	*2014*
Bronze Medal & Outstanding Paper Award, Altera Innovate Asia FPGA Design Competition	*2013*
Direct Admission with Recommendation, International Physics Olympiad Selection Camp	*2010*
National Representative Honorable Mention, International Physics Olympiad Selection Camp	*2009*
1st Runner-Up/Third Prize, Regional/National Physics Olympiad for Senior High School	*2009*
Honorable Mention, International Junior Science Olympiad Selection Camp	*2008*

SKILLS

Toolbox/Software	PyTorch, TensorFlow, Theano, Keras, Torch, Caffe, CUDA, cuDNN, LaTeX
Programming Languages	Python, MATLAB, R, C/C++, Lua, C#, JAVA, Verilog, JavaScript, HTML5