Yen-Cheng Liu

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EDUCATION

Georgia Tech, Atlanta, GA
Ph.D. student, Machine Learning — Aug. 2018 -

National Taiwan University, Taipei, Taiwan
M.S., Electrical Engineering — Sep. 2015 - June 2017
GPA: 4.19/4.30

Technical University of Munich, Munich, Germany
Exchange Student, EE&IT — Sep. 2014 - Mar. 2015

National Chiao Tung University, Hsinchu, Taiwan
B.S., Electrical and Computer Engineering — Sep. 2011 - June 2015
GPA: 4.24/4.30

RESEARCH INTERESTS

Machine Learning, Computer Vision, Robotics,
Domain Adaptation, Representation Learning, Multi-Modalities Machine Perceptions.

PUBLICATIONS

Y.-C. Liu, Y.-Y Yeh, T.-C. Fu, S.-D. Wang, W.-C. Chiu, Y.-C. F. Wang. Detach and Adapt: Learning Cross-Domain Disentangled Deep Representation, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018 **(Spotlight Presentation)**

Y.-J. Li, F.-E. Yang, **Y.-C. Liu**, Y.-Y Yeh, X. Du, Y.-C. F. Wang. Adaptation and Re-Identification Network: An Unsupervised Deep Transfer Learning Approach to Person Re-Identification, *IEEE Conference on Computer Vision and Pattern Recognition Workshops (CVPR workshop)*, 2018

T.-S. Kuo, K.-S. Tseng, J.-W. Yan **Y.-C. Liu**, Y.-C. F. Wang. Deep Aggregation Net for Land Cover Classification, *IEEE Conference on Computer Vision and Pattern Recognition Workshops (CVPR workshop)*, 2018

A. Liu, **Y.-C. Liu**, Y.-Y Yeh, Y.-C. F. Wang. Anonymous Paper Title, *Conference on Neural Information Processing Systems (NIPS)*, 2018 (under review)

Y.-Y Yeh, **Y.-C. Liu**, W.-C. Chiu, Y.-C. F. Wang. Anonymous Paper Title, *European Conference on Computer Vision (ECCV)*, 2018 (under review)

Y.-C. Liu, W.-C. Chiu, S.-D. Wang, Y.-C. F. Wang. Domain-Adaptive Generative Adversarial Networks for Sketch-to-Photo Inversion, *IEEE International Workshop on Machine Learning for Signal Processing (MLSP)*, 2017

A.-S. Liu, T.-W. Hsu, P.-H. Hsiao, **Y.-C. Liu**, L.-C. Fu. The Manhunt Network: People Tracking in Hybrid-Overlapping Under the Vertical Top-view Depth Camera Networks, *IEEE Conference on Advanced Robotics and Intelligent Systems*, 2016

Y.-C. Liu, P.-H. Ciou, C.-S. Fuh. 2D+3D Morphing Model, *IPPR Conference on Computer Vision, Graphics, and Image Processing (CVGIP)*, 2016

EXPERIENCE

Research Assistant — National Taiwan University
Advisor: Prof. Yu-Chiang Frank Wang — Taipei, Taiwan

• **Single-Image Depth Estimation with Semantics Consistency**
- Integrated unsupervised depth estimation with semantic segmentation
- Proposed segment-based stereo consistency to improve depth estimation

• **Stochastic Video Synthesis and Completion**
- Extracted time-order representation from limited anchor frames
- Achieved video prediction and interpolation based on sequence-sequence model

Graduate Research — CITI, Academia Sinica
Advisor: Prof. Yu-Chiang Frank Wang — Taipei, Taiwan

• **Learning Cross-Domain Disentangled Representation**
- Excelled the state-of-the-art in task of unsupervised domain adaptation
- Achieved unsupervised image translation conditioned on given attribute

• **Domain-Adaptive GAN for Sketch Inversion**
- Proposed cross-style sketch-to-photo inversion based on generative models
- Adapted the sketch-to-photo inversion to unsupervised sketch style

Teaching Assistant — National Taiwan University
Instructor: Chung-Yang (Ric) Huang — Taipei, Taiwan
Course: Data Structure and Programming
- Provided one-to-one assistance for 150+ students and graded the programming assignments

SIDE PROJECTS

Jenga Builder
Automatic reconstruction of Jenga tower using 6-DOF robotics arm and RGB-cam

Bio-baseball
Created sports simulator controlled by eye movement and forearm muscles

AI-Bomber-Man
Applied Flood-Fill algorithm to create multiple AI enemies of Bomberman game

Hiticket.tk
Built up real-time system for secondhand ticket information exchange

COMPUTER SKILLS

Languages: C, C++, Java, Perl, Bash, Python, MATLAB, Lua, SQL, LaTeX.

Toolbox/Software: TensorFlow, PyTorch, Theano, Torch, Caffe, Chainer, Unity.

HONORS &AWARDS

GAN MOST Competition First Prize *2017*

Rotary International Graduate Student Scholarship *2016*

Dean's List Award (4 times) *2011-2015*

Exchange Student Scholarship *2014*

Pan Wen Yuan Foundation Scholarship *2013*