

Yen-Cheng Liu

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| Education | Georgia Tech , Atlanta, GA <i>Ph.D. student</i> , Machine Learning GPA: 4.00/4.00 | Aug. 2018 - Present |
| | National Taiwan University , Taipei, Taiwan <i>M.S.</i> , Electrical Engineering GPA: 4.19/4.30 | Sep. 2015 - June 2017 |
| | Technical University of Munich , Munich, Germany <i>Exchange Student</i> , EE&IT | Sep. 2014 - Mar. 2015 |
| | National Chiao Tung University , Hsinchu, Taiwan <i>B.S.</i> , Electrical and Computer Engineering GPA: 4.24/4.30 | Sep. 2011 - June 2015 |
| Research Interest | Machine Learning, Computer Vision, Domain Adaptation, Representation Learning, Multi-agent Learning. | |
| Selected Publications | [1] J. Tian, Y.-C. Liu , Y.-C. Hsu, N. Glaser, W. Cheung, Z. Kira. Anonymous Paper Title, <i>International Conference on Machine Learning (ICML)</i> , 2020 (Under review) | |
| | [2] Y.-C. Liu , J. Tian, N. Glaser, Z. Kira. When2com: Multi-Agent Collaborative Perception via Communication Graph Grouping, <i>IEEE Conference on Computer Vision and Pattern Recognition (CVPR)</i> , 2020 | |
| | [3] Y.-C. Liu , J. Tian, C.-Y. Ma, N. Glaser, C.-W. Kuo, Z. Kira. Who2com: Collaborative Perception via Learnable Handshake communication, <i>International Conference on Robotics and Automation (ICRA)</i> , 2020 | |
| | [4] J. Tian, W. Chung, N. Glaser, Y.-C. Liu , Z. Kira. UNO: Uncertainty-aware Noisy-Or Multimodal Fusion for Unanticipated Input Degradation, <i>International Conference on Robotics and Automation (ICRA)</i> , 2020 | |
| | [5] P.-Y. Chen*, A. Liu*, Y.-C. Liu , Y.-C. F. Wang. Towards Scene Understanding: Unsupervised Monocular Depth Estimation with Semantic-aware Representation, <i>IEEE Conference on Computer Vision and Pattern Recognition (CVPR)</i> , 2019 (Oral ; * equal contributions) | |
| | [6] W.-Y. Chen, Y.-C. Liu , Z. Kira, Y.-C. F. Wang, J.-B. Huang. A Closer Look at Few-shot Classification, <i>International Conference on Learning Representations (ICLR)</i> , 2019 | |
| | [7] A. Liu, Y.-C. Liu , Y.-Y. Yeh, Y.-C. F. Wang. A Unified Feature Disentangler for Multi-Domain Image Translation and Manipulation, <i>Conference on Neural Information Processing Systems (NeurIPS)</i> , 2018 | |
| | [8] 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, <i>IEEE Conference on Computer Vision and Pattern Recognition (CVPR)</i> , 2018 (Spotlight) | |
| | [9] Y.-Y. Yeh, Y.-C. Liu , W.-C. Chiu, Y.-C. F. Wang. Static2Dynamic: Video Inference from a Deep Glimpse, <i>IEEE Transactions on Emerging Topics in Computational Intelligence</i> , 2020 | |

- [10] J. Tian, W. Cheung, N. Glaser, **Y.-C. Liu**, Z. Kira. UNO: Uncertainty-aware Noisy-Or Multimodal Fusion for Unanticipated Input Degradation, *International Conference on Intelligent Robots and Systems (IROS Workshops)*, 2019
- [11] Y.C. Hsu, **Y.-C. Liu**, Z. Kira. Re-evaluating Continual Learning Scenarios: A Categorization and Case for Strong Baselines, *Conference on Neural Information Processing Systems Workshops (NeurIPS Workshops)*, 2018
- [12] 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 workshops)*, 2018
- [13] 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 workshops)*, 2018
- [14] **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

EXPERIENCE

Graduate Research Assistant

Georgia Tech
Atlanta, GA

Advisor: Prof. Zolt Kira

• Collaborative Perception [2,3]

- Build multi-agent collaborative perception systems to improve conventional single-agent vision tasks

• Few-shot Classification [6]

- Re-evaluated current few-shot classification models and strong baselines

• Continual Learning [11]

- Re-evaluated current continual learning algorithms and strong baselines

Research Assistant

National Taiwan University
Taipei, Taiwan

Advisor: Prof. Yu-Chiang Frank Wang

• Single-Image Depth Estimation with Semantics Consistency [5]

- Integrated unsupervised depth estimation with semantic segmentation

- Proposed segment-based stereo consistency to improve depth estimation

• Stochastic Video Synthesis and Completion [9]

- Extracted time-order representation from limited anchor frames

- Achieved video prediction and interpolation based on sequence-sequence model

Graduate Research

CITI, Academia Sinica
Taipei, Taiwan

Advisor: Prof. Yu-Chiang Frank Wang

• Learning Cross-Domain Disentangled Representation [7, 8]

- 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 [14]

- Proposed cross-style sketch-to-photo inversion based on generative models

- Adapted the sketch-to-photo inversion to unsupervised sketch style

Academic Services

Reviewer: CVPR '19, ICCV '19, AAAI '20, CVPR '20, ECCV '20, NeurIPS '20

Skills

Computer Languages: C, C++, Java, Bash, Python, MATLAB, \LaTeX .
Toolbox/Software: PyTorch, TensorFlow, Torch, Caffe, Chainer, Unity.

Honors & Awards

Dean's List Award (4 times)

2011-2015

Pan Wen Yuan Foundation Scholarship

2013