Yen-Cheng Liu

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Education

Georgia Tech, Atlanta, GA
Ph.D. student, Machine Learning — Aug. 2018 - Aug. 2023 (Expected)
GPA: 4.00/4.00

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

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

EXPERIENCE

Research Intern — Meta/Facebook
Menlo Park/Burlingame, CA — May 2020 - Dec 2022
Mentors: Chih-Yao Ma, Zijian He, Peter Vajda (Mobile Vision Team)
- Improving Label-efficiency of Object Detection [2,3,4]
- Improving Parameter-efficiency of Multi-task Learning [1]

Graduate Research Assistant — Georgia Tech
Atlanta, GA — Aug 2018 - Present
Advisor: Prof. Zsolt Kira
- Multi-Agent Collaborative Perception and Scene Understanding [5,6,7,8]
- Benchmarking on Continual Learning [15]
- Learning with limited supervision [2,3,4,11]

Graduate Research — Academia Sinica & NTU
Taipei, Taiwan — July 2016 - July 2018
Advisor: Prof. Yu-Chiang Frank Wang
- Cross-Domain Disentangled Representation Learning [12,15]
- Single-Image Depth Estimation with Semantics Consistency[10]
- Benchmarking on Few-shot Classification [11]

Research Interest

Machine Learning, Computer Vision
Scene Understanding: Object Detection, Semantic Segmentation, Depth Estimation
Data-efficient Learning: Few-shot/Semi-supervised Learning, Domain Adaptation
Multi-task Learning

Selected Publications

[1] **Y.-C. Liu**, C.-Y. Ma, Z. He, Z. Kira. Anonymous title, *Conference on Neural Information Processing Systems (NeurIPS)*, 2022 (under submission)

[2] **Y.-C. Liu**, C.-Y. Ma, X. Dai, J. Tian, P. Vajda, Z. He, Z. Kira. Open-set Semi-Supervised Object Detection, *European Conference on Computer Vision (ECCV)*, 2022 **(Oral)**

[3] **Y.-C. Liu**, C.-Y. Ma, Z. Kira. Unbiased Teacher v2: Semi-supervised Object Detection for Anchor-free and Anchor-based Detectors, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2022

[4] **Y.-C. Liu**, C.-Y. Ma, Z. He, C.-W. Kuo, K. Chen, P. Zhang, B. Wu, Z. Kira, P. Vajda. Unbiased Teacher for Semi-Supervised Object Detection, *International Conference on Learning Representations (ICLR)*, 2021

[5] N. Glaser, **Y.-C. Liu**, J. Tian, Z. Kira Overcoming Obstructions via Bandwidth-Limited Multi-Agent Spatial Handshaking, *International Conference on Intelligent Robots and Systems (IROS)*, 2021

[6] J. Tian, **Y.-C. Liu**, N. Glaser, Y.-C. Hsu, Z. Kira. Posterior Re-calibration for Imbalanced Datasets, *Conference on Neural Information Processing Systems (NeurIPS)*, 2020

[7] **Y.-C. Liu**, J. Tian, N. Glaser, Z. Kira. When2com: Multi-Agent Collaborative Perception via Communication Graph Grouping, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020

[8] **Y.-C. Liu**, J. Tian, C.-Y. Ma, N. Glaser, C.-W. Kuo, Z. Kira. Who2com: Collaborative Perception via Learnable Handshake communication, *International Conference on Robotics and Automation (ICRA)*, 2020

[9] J. Tian, W. Chung, N. Glaser, **Y.-C. Liu**, Z. Kira. UNO: Uncertainty-aware Noisy-Or Multimodal Fusion for Unanticipated Input Degradation, *International Conference on Robotics and Automation (ICRA)*, 2020

[10] P.-Y. Chen*, A. Liu*, **Y.-C. Liu**, Y.-C. F. Wang. Towards Scene Understanding: Unsupervised Monocular Depth Estimation with Semantic-aware Representation , *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019 **(Oral**; * equal contributions**)**

[11] W.-Y. Chen, **Y.-C. Liu**, Z. Kira, Y.-C. F. Wang, J.-B. Huang. A Closer Look at Few-shot Classification, *International Conference on Learning Representations (ICLR)*, 2019

[12] A. Liu, **Y.-C. Liu**, Y.-Y Yeh, Y.-C. F. Wang. A Unified Feature Disentangler for Multi-Domain Image Translation and Manipulation, *Conference on Neural Information Processing Systems (NeurIPS)*, 2018

[13] **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)**

[14] 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

[15] 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

Academic Services

Reviewer: CVPR 2019-22, ICCV 2019-21, AAAI 2020, ECCV 2020, NeurIPS 2020-22, ICLR 2021-23, ICML 2021-22, PAMI, IJCV