

YU-JHE LI

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RESEARCH INTERESTS

Computer Vision and Machine Learning, particularly representation learning, domain adaptation, and 2D multi-object tracking with multiple cameras.

EDUCATION

Carnegie Mellon University, Pittsburgh, PA *Aug. 2020 - Current*
Ph.D. in Electrical and Computer Engineering (Advisor: Prof. Kris M. Kitani)

National Taiwan University, Taipei, Taiwan *Sep. 2017 - Jan. 2019*
M.S. in Communication Engineering (Advisor: Prof. Frank Wang) *Major GPA: 4.18/4.3*

National Tsing Hua University, Hsinchu, Taiwan *Sep. 2013 - Jan. 2017*
B.S. in Electrical Engineering and Computer Science *Major GPA: 4.09/4.3*

RESEARCH EXPERIENCE

The Robotics Institute, Carnegie Mellon University *September 2019 - August 2020*
Research Associate working with Prof. Kris M. Kitani *Pittsburgh, PA, USA*

- Built cross-camera tracking model for workers in construction sites using location, motion, and appearance deep features, followed by action recognition.
- Learned clothing color invariant representations via adversarial learning and body structure disentanglement for person re-identification.

Vision and Learning Lab, National Taiwan University *September 2017 - July 2019*
Graduate Research Assistant working with Prof. Yu-Chiang Frank Wang *Taipei, Taiwan*

- Built novel deep framework for unsupervised learning and domain adaptation in re-identification via unsupervised pose disentanglement.
- Learned resolution-invariant representations for cross-resolution tasks via adversarial learning of super-resolution and image generation.

Institute for Health Informatics, University of Minnesota *October 2016 - January 2017*
Undergraduate Research Assistant working with Prof. Chih-Lin Chi *Minneapolis, MN, USA*

- Developed machine learning model for statistical genetic disease prediction and analysis.

PUBLICATIONS

Pre-prints:

- **Yu-Jhe Li**^{*}, Yun-Chun Chen^{*}, Yen-Yu Lin, and Yu-Chiang Frank Wang. “Cross-Resolution Adversarial Dual Network for Person Re-Identification and Beyond.” (*In Arxiv 2020, TPAMI undergoing Major Revision process*) (^{*} indicates equal contribution)

Conference Papers:

1. **Yu-Jhe Li**, Xinshuo Wen, Kris M. Kitani. “Learning Shape Representations for Person Re-identification under Clothing Change.” *Winter Conference on Applications of Computer Vision (WACV)*. Jan 2021.
2. Jia-Wei Yan, Ci-Siang Lin, Fu-En Yang, **Yu-Jhe Li**, and Yu-Chiang Frank Wang. “Semantics-Guided Representation Learning with Applications to Visual Synthesis.” *International Conference on Pattern Recognition (ICPR)*. Jan 2021.

3. Yen-Ting Liu, **Yu-Jhe Li**, and Yu-Chiang Frank Wang. “Transforming Video Concepts into Video Summarization.” *Asian Conference on Computer Vision (ACCV)*. Nov 2020.
4. **Yu-Jhe Li**, Ci-Siang Lin, Yan-Bo Lin, and Yu-Chiang Frank Wang. “Cross-Dataset Person Re-Identification via Unsupervised Pose Disentanglement and Adaptation.” *IEEE International Conference on Computer Vision (ICCV)*. Nov 2019.
5. **Yu-Jhe Li**^{*}, Yun-Chun Chen^{*}, Yen-Yu Lin, Xiaofei Du, and Yu-Chiang Frank Wang. “Recover and Identify: Generative Dual Model for Cross-Resolution Person Re-Identification.” *IEEE International Conference on Computer Vision (ICCV)*. Nov 2019. (* indicates equal contribution)
6. Yen-Ting Liu, **Yu-Jhe Li**, Fu-En Yang, Shang-Fu Chen, and Yu-Chiang Frank Wang. “Learning Hierarchical Self-Attention for Video Summarization.” *IEEE International Conference on Image Processing (ICIP)*. Sep 2019.
7. Wen-Hsuan Chu, **Yu-Jhe Li**, Jing-Cheng Chang, and Yu-Chiang Frank Wang. “Spot and Learn: A Maximum-Entropy Image Patch Sampler for Few-Shot Classification.” *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. Jun 2019.
8. Yan-Bo Lin, **Yu-Jhe Li**, and Yu-Chiang Frank Wang. “Dual-modality Seq2seq Network for Audio-Visual Event Localization.” *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*. May 2019.
9. **Yu-Jhe Li**^{*}, Yun-Chun Chen^{*}, XiaoFei Du, and Yu-Chiang Frank Wang. “Learning Resolution-Invariant Deep Representations for Person Re-Identification.” *AAAI Conference on Artificial Intelligence (AAAI)*. Jan 2019. (* indicates equal contribution)
10. **Yu-Jhe Li**, Hsin-Yu Chang, Yu-Jing Lin, Po-Wei Wu, and Yu-Chiang Frank Wang. “Deep Reinforcement Learning for Playing 2.5D Fighting Games.” *IEEE International Conference on Image Processing (ICIP)*. Oct 2018.
11. **Yu-Jhe Li**, Fu-En Yang, Yen-Cheng Liu, Yu-Ying Yeh, Xiao-Fei Du, and Yu-Chiang Frank Wang. “Adaptation and Re-Identification Network: An Unsupervised Deep Transfer Learning Approach to Person Re-Identification.” *IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops*. Jun 2018.
12. Yun-Chun Chen, **Yu-Jhe Li**, Aragorn Tseng, and Tsungnan Lin. “Deep Learning for Malicious Flow Detection.” *IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC)*. Oct 2017.

WORK EXPERIENCE

Internships

- Software Engineer at Dragon Cloud AI Inc., Winter 2018. *San Francisco, USA*
- Software Engineer at Trend Micro Inc., Summer 2017. *Taipei, Taiwan*

ACADEMIC HONORS

- **Best Master Thesis Award**, *TAAI 2019*. *Taipei, Taiwan*
- **Best Master Thesis Award**, *IPPR 2019*. *Taipei, Taiwan*
- **Foxconn Technology Research Award**, *Foxconn Technology 2019*. *Taipei, Taiwan*
- **NTU Academic Outstanding Award**, *National Taiwan University 2018*. *Taipei, Taiwan*
- **Student Paper Award**, *CVGIP 2018*. *Tainan, Taiwan*
- **Second Place**, *Nvidia GTC 2018 research poster competition*. *Taipei, Taiwan*

PROFESSIONAL ACTIVITY

- **Reviewer** for CVPR 2021, AAAI 2021, WACV 2021, CVPR 2020, ECCV 2020, ACCV 2020.
- **Invited Speaker** at The 3rd Augmented Intelligence and Interaction (AII) Workshop. *Jul. 2019*
- **Invited Teaching Assistant** at AI summer school in Hsinchu. *Aug. 2018*