

Yingwei Li

CONTACT INFORMATION	Department of Computer Science Johns Hopkins University	yingwei.li@jhu.edu http://yingwei.li
RESEARCH INTERESTS	My research interests mainly lay in computer vision, especially on autonomous driving [12,13, 17,18], robust representation learning [3,4,7,8, 10 ,12,14,15,16, 17,18], multi-modality fusion [2,16, 17,18], automated machine learning [5,6,9,11], medical machine intelligence [1,2,3]. Representative papers are highlighted in bold . I am also open to new topics.	
EDUCATION	Johns Hopkins University (JHU)	2018 - 2022 (expected)
	Ph.D. in Computer Science Advisor: Alan Yuille	
	National Taiwan University (NTU) Exchange Student in Computer Science and Information Engineering	Spring 2017
EXPERIENCE	Fudan University (Fudan) B.S. in Computer Science, <i>Honor Class</i>	2014 - 2018
	Google Research Intern Working on accurate and robust multi-modality fusion for 3D object detection. Mentors: Dr. Mingxing Tan, Dr. Denny Zhou, Mr. Jiquan Ngiam and Dr. Adams Wei Yu	06/2021 - present
	Waymo Software Engineering Intern Working on accurate and robust multi-modality fusion for long-range object distance estimation. Mentors: Prof. Hang Zhao, Dr. Ruichi Yu, Dr. Maya Kabkab and Dr. Tiffany Yu-Han Chen	05/2020 - 11/2020
	ByteDance AI Lab Research Intern Working on neural architecture search and lightweight deep learning model design. Mentors: Dr. Linjie Yang, Dr. Xiaojie Jin and Dr. Xiaochen Lian	05/2019 - 11/2019
	ByteDance AI Lab University Collaboration Program Assessing and improving the adversarial robustness of deep learning models in a practical way. Mentor: Dr. Xiaohui Shen	09/2018 - 05/2019
	TuSimple Research Intern Mentor: Dr. Naiyan Wang	06/2016 - 09/2016
TEACHING	Johns Hopkins University (JHU) Role: Teaching Assistant Course: EN.601.783 <i>Vision as Bayesian Inference</i> Instructor: Alan Yuille	Spring 2021

- [18] **Yingwei Li***, Adams Wei Yu*, Tianjian Meng, Ben Caine, Jiquan Ngiam, Daiyi Peng, Junyang Shen, Yifeng Lu, Denny Zhou, Quoc Le, Alan Yuille, Mingxing Tan. **Lidar-Camera Deep Fusion for Multi-Modal 3D Object Detection**. Under Review.
- [17] **Yingwei Li**, Tiffany Chen, Maya Kabkab, Ruichi Yu, Longlong Jing, Yurong You, Hang Zhao. **R4D: Utilizing Reference Objects for Long-Range Distance Estimation**. Under Review.
- [16] Junfei Xiao, Longlong Jing, Lin Zhang, Ju He, Qi She, Zongwei Zhou, Alan Yuille, **Yingwei Li**. Learning from Temporal Gradient for Semi-supervised Action Recognition. Under Review.
- [15] Vipul Gupta, Zhuowan Li, Adam Kortylewski, Chenyu Zhang, **Yingwei Li**, Alan Yuille. Swap-Mix: Diagnosing and Regularizing the Over-reliance on Visual Context in Visual Question Answering. Under Review.
- [14] Shunchang Liu, Jiakai Wang, Aishan Liu, **Yingwei Li**, Yijie Gao, Xianglong Liu, Dacheng Tao. Harnessing Perceptual Adversarial Patches for Crowd Counting. Under Review.
- [13] Longlong Jing, Ruichi Yu, Jiyang Gao, Henrik Kretschmar, Kang Li, Charles R. Qi, Hang Zhao, Alper Ayvaci, Xu Chen, Dillon Cower, **Yingwei Li**, Yurong You, Han Deng, Congcong Li, Dragomir Anguelov. Depth Matters Most: Improving Per-Object Depth Estimation for Monocular 3D Detection and Tracking. Under Review.
- [12] Ziqi Zhang, Xinge Zhu, **Yingwei Li**, Xiangqun Chen, Yao Guo. Adversarial Attacks on Monocular Depth Estimation. In *CoRR*, *abs/2003.10315*.

- [11] Huaijin Pi, Huiyu Wang, **Yingwei Li**, Zizhang Li, Alan Yuille. Searching for TrioNet: Combining Convolution with Local and Global Self-Attention. In *Proceedings of the British Machine Vision Conference (BMVC)*, BMVA Press, 2021.
- [10] **Yingwei Li**, Qihang Yu, Mingxing Tan, Jieru Mei, Peng Tang, Wei Shen, Alan Yuille, Cihang Xie. **Shape-Texture Debaised Neural Network Training**. In *International Conference on Learning Representations (ICLR)*, 2021.
- [9] Qihang Yu, **Yingwei Li**, Jieru Mei, Yuyin Zhou, Alan L. Yuille. CAKES: Channel-wise Automatic KErnel Shrinking for Efficient 3D Network. In *Proceedings of the Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI)*. AAAI Press, 2021.
- [8] Song Bai, **Yingwei Li**, Yuyin Zhou, Qizhu Li, Philip H.S. Torr. Adversarial Metric Attack for Person Re-identification. In *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, IEEE, 2020.
- [7] **Yingwei Li**, Song Bai, Cihang Xie, Zhenyu Liao, Xiaohui Shen, Alan Yuille. Regional Homogeneity: Towards Learning Transferable Universal Adversarial Perturbations Against Defenses. In *Proceedings of the European Conference on Computer Vision (ECCV)*, Springer, 2020.
- [6] **Yingwei Li**, Xiaojie Jin, Jieru Mei, Xiaochen Lian, Linjie Yang, Cihang Xie, Qihang Yu, Yuyin Zhou, Song Bai, Alan Yuille. Neural Architecture Search for Lightweight Non-Local Networks. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, IEEE, 2020.
- [5] Jieru Mei, **Yingwei Li**, Xiaochen Lian, Xiaojie Jin, Linjie Yang, Alan Yuille, Jianchao Yang. AtomNAS: Fine-Grained End-to-End Neural Architecture Search. In *International Conference on Learning Representations (ICLR)*, 2020.
- [4] **Yingwei Li**, Song Bai, Yuyin Zhou, Cihang Xie, Zhishuai Zhang, Alan Yuille. Learning Transferable Adversarial Examples via Ghost Networks. In *Proceedings of The Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI)*, AAAI Press, 2020.

- [3] **Yingwei Li***, Zhuotun Zhu*, Yuyin Zhou, Yingda Xia, Wei Shen, Elliot K. Fishman, and Alan L. Yuille. Volumetric Medical Image Segmentation: A 3D Deep Coarse-to-fine Framework and Its Adversarial Examples. In *Deep Learning and Convolutional Neural Networks for Medical Image Computing*, Advances in Computer Vision and Pattern Recognition, Springer, ISBN 978-3-030-13968-1, 2019.
- [2] Yuyin Zhou, **Yingwei Li**, Zhishuai Zhang, Yan Wang, Angtian Wang, Elliot K. Fishman, Alan Yuille, Seyoun Park. Hyper-Pairing Network for Multi-Phase Pancreatic Ductal Adenocarcinoma Segmentation. In *Proceedings of the International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)*, Springer, 2019.
- [1] Yuyin Zhou, David Dreizin, **Yingwei Li**, Zhishuai Zhang, Yan Wang, Alan Yuille. Multi-Scale Attentional Network for Multi-Focal Segmentation of Active Bleed after Pelvic Fractures. In *Proceedings of 10th International Workshop on Machine Learning in Medical Imaging (MLMI) Held in Conjunction with MICCAI*, Springer, 2019.

TALKS

- Lidar-Camera Deep Fusion for Multi-Modal 3D Object Detection
 - Google Brain | Waymo meeting Dec, 2021
 - Google Cloud Vision/Video Tech Talk Jan, 2022
- R4D: Utilizing Reference Objects for Long-Range Distance Estimation
 - Google Brain | Waymo meeting July, 2021
- Shape-Texture Debiased Neural Network Training
 - Qingyuan Seminars Feb, 2021
 - Visual Informatics Group @ University of Texas at Austin Sep, 2021
- Learning Transferable Adversarial Examples via Ghost Networks
 - AdvML Workshop @ CVPR 2019 June, 2019
 - The Thirty-Fourth AAAI Conference on Artificial Intelligence Feb, 2020
- Neural Architecture Search for Lightweight Non-Local Networks
 - Kwai Silicon Valley Lab May, 2020

SELECTED AWARDS

- ICLR Travel Award 2020
- First Prize Scholarship from Fudan University Education Development Foundation 2017
- SCSK Scholarship 2016
- Silver Medal, ACM-ICPC Shanghai Regional Contest 2014
- Bronze Medal, China National Olympiad in Informatics (NOI) 2013
- First Prize, National Olympiad in Informatics in Provinces (NOIP) 2012 & 2013

SERVICE

- Co-organizer of
 - Practical Deep Learning in the Wild AAAI 2022
 - Adversarial Robustness in the Real World ECCV 2020
 - Adversarial Learning for Multimedia ACMMM 2021
 - Adversarial Robustness in the Real World ICCV 2021
- Reviewer for IEEE TIP, IEEE TDSC, Neurocomputing, Pattern Recognition, AmlCV@CVPR2020, SRML@ICML2021, SecMI@ICLR2021, RseMI@AAAI2021 AAAI 2021, IJCAI 2021, CVPR 2021, ICCV 2021, NeurIPS 2021, AAAI 2022, ICLR 2022, CVPR 2022.