

HUAIZU JIANG

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EDUCATION

- University of Massachusetts, Amherst** Sep.2015 - Aug.2020 (expected)
Ph.D. student, College of Information and Computer Sciences
Advisor: Profesor Erik Learned-Miller
- Xi'an Jiaotong University, Xi'an, China** Sep.2009 - Jun.2012
Master of Pattern Recognition and Intelligent Systems
Advisor: Professor Nanning Zheng
Thesis: *Learning to Segment Salient Objects* (in Chinese)
Outstanding Master Thesis Award
- Xi'an Jiaotong University, Xi'an, China** Sep.2005 - Jun.2009
Bachelor of Electricial Engineering

RESEARCH INTEREST

I have broad interest in computer vision, machine/deep/reinforcement learning, natural language processing, and computational photography.

My Ph.D. research mainly focuses on visual learning from large-scale unlabeled data, particularly massive unlabeled videos (*e.g.*, from YouTube). My long-term research goal is to advance visual intelligence by utilizing massive unlabeled visual data, mining knowledge written in form of text, and learning from interactions with environment and other intelligent agents. Besides, I am also passionate about building smart tools to help people more easily record and share life experiences.

EXPERIENCE

- Reseach Intern,** May.2019 - Aug. 2019
Facebook AI Research (FAIR), Facebook, Menlo Park, US
Work with Dr. Xinlei Chen, Dr. Ishan Misra, and Dr. Marcus Rohrbach on joint language and vision understanding
- Research Intern,** May.2018 - Aug. 2018
Learning and Perception Research Group, NVIDIA Research, Westford, US
Worked with Dr. Deqing Sun, Dr. Varun Jampani, and Prof. Erik Learned-Miller on scene flow estimation
- Research Intern,** May.2017 - Aug. 2017
Mobile Visual Computing Group, NVIDIA Research, Westford, US
Worked with Dr. Deqing Sun, Dr. Varun Jampani, and Prof. Ming-Hsuan Yang on multi-frame variable-length video interpolation
- Research Intern,** Sep.2010 - Feb.2011
Media Computing Group, Microsoft Research Asia (MSRA), Beijing, China
Worked with Dr. Jingdong Wang on image segmentation and salient object detection

PUBLICATIONS

Google Scholar: <https://scholar.google.com/citations?user=0hHqYoAAAAAJ&hl=en>

- **Huaizu Jiang**, Deqing Sun, Varun Jampani, Zhaoyang Lv, Erik Learned-Miller, Jan Kautz. SENSE: a Shared Encoder for Scene Flow Estimation. International Conference on Computer Vision (**ICCV**), 2019 (**Oral**).
- Aruni Roy Chowdhury, Prithvijit Chakrabarty, Ashish Singh, SouYoung Jin, **Huaizu Jiang**, Liangliang Cao, Erik Learned-Miller. Automatic adaptation of object detectors to new domains using self-training. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2019.
- **Huaizu Jiang**, Gustav Larsson, Michael Maire, Greg Shakhnarovich, Erik Learned-Miller. Self-Supervised Relative Depth Learning for Urban Scene Understanding. European Conference on Computer Vision (**ECCV**), 2018.
- SouYoung Jin*, Aruni RoyChowdhury*, **Huaizu Jiang**, Ashish Singh, Aditya Prasad, Deep Chakraborty, Erik Learned-Miller. Unsupervised Hard Example Mining from Videos for Improved Object Detection. European Conference on Computer Vision (**ECCV**), 2018.
- **Huaizu Jiang**, Deqing Sun, Varun Jampani, Ming-Hsuan Yang, Erik Learned-Miller, Jan Kautz. SuperSloMo: High Quality Estimation of Multiple Intermediate Frames for Video Interpolation. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2018 (**spotlight**).
- Jong-Chyi Su*, Chenyu Wu*, **Huaizu Jiang**, Subhansu Maji. Reasoning about Fine-grained Attribute Phrases using Reference Games. International Conference on Computer Vision (**ICCV**), 2017.
- **Huaizu Jiang**, Erik Learned-Miller. Face Detection with the Faster R-CNN. IEEE Automatic Face and Gesture Recognition (**FG**), 2017.
- Jingdong Wang, **Huaizu Jiang**, Zejian Yuan, Ming-Ming Cheng, Nanning Zheng. Salient Object Detection: A Discriminative Regional Integration Approach. International Journal of Computer Vision (**IJCV**), 2017.
- Ali Borji, Ming-Ming Cheng, **Huaizu Jiang**, Jia Li. Salient Object Detection: A Benchmark. IEEE Trans. on Image Processing (**TIP**), 2015.
- **Huaizu Jiang**, Jinjun Wang, Yihong Gong, Na Rong, Zhenhua Chai, Nanning Zheng. Online Multi-Target Tracking with Unified Handling of Complex Scenarios. IEEE Trans. on Image Processing (**TIP**), 2015.
- Jingdong Wang, **Huaizu Jiang**, Yangqing Jia, Xian-Sheng Hua, Changshui Zhang, Long Quan. Regularized Tree Partitioning for Unsupervised Image Segmentation. IEEE Trans. on Image Processing (**TIP**), 2014.
- **Huaizu Jiang**, Jingdong Wang, Zejian Yuan, Yang Wu, Nanning Zheng. Salient Object Detection: A Discriminative Regional Feature Integration Approach. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2013.
- **Huaizu Jiang**, Yang Wu, Zejian Yuan. Probabilistic Salient Object Contour Detection Based on Superpixels. International Conference on Image Processing (**ICIP**), 2013.
- **Huaizu Jiang**, Jingdong Wang, Zejian Yuan, Tie Liu, Nanning Zheng, Shipeng Li. Automatic Salient Object Segmentation Based on Context and Shape Prior. British Machine Vision Conference (**BMVC**), 2011.
(Recognized as one of top four algorithms in a survey of ECCV 2012)

TALKS

- SuperSloMo: High-Quality Multiple Intermediate Frames Estimation for Video Interpolation, CVPR Tutorial of *Deep Learning for Content Generation*, June 2019.

- Estimating Multiple Intermediate Frames for Video Interpolation and Visual Representation Learning, MIT Vision Seminar. April 2019.
- SuperSloMo: High-Quality Multiple Intermediate Frames Estimation for Video Interpolation, CVPR spotlight talk, June 2018.

AWARDS AND SCHOLARSHIP

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| • NVIDIA Graduate Fellowship | 2019-2020 |
| • Adobe Research Fellowship | 2019 |
| • Outstanding Reviewer, IEEE/CVF CVPR | 2019 |
| • Passed Portfolio (qualify exam) with Distinction, CICS, UMass Amherst | 2019 |
| • Outstanding Master Thesis, Xi'an Jiaotong University | Jun. 2012 |
| • Excellent Graduate Student, Xi'an Jiaotong University | Sep.2010, Sep.2011 |
| • Excellent Undergraduate Student, Xi'an Jiaotong University | Sep.2008 |