

Zhenheng YANG

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EDUCATION

AUG. 2014 - NOV. 2018 (EXPECT)	Ph.D. candidate in Electrical Engineering, University of Southern California , Los Angeles, US Computer Vision Advisor: Prof. Ramakant NEVATIA
AUG. 2010 - JUL. 2014	Bachelor of Engineering, Tsinghua University , Beijing, China

RESEARCH & PROJECT

Applied Machine Learning, Facebook Inc. (May 2018 - Aug. 2018)
Project: Weakly supervised object detection

Institute of Deep Learning, Baidu USA (May 2017 - Feb. 2018)
Project: Unsupervised 3D geometry learning

- **Unsupervised 3D Learning**

Proposed to use 3D geometry consistency in unsupervised learning of depth and normal map (AAAI 2018 oral, one patent)
Proposed to learn geometrical edge from 3D scene structure (CVPR 2018 spotlight)

Institute for Robotics and Intelligent Systems, USC (Jul. 2016 - May. 2017)
Project: Interactive Activity Recognition and temporal activity proposal

- **Spatio-temporal Activity Detection**

Proposed to use activity temporal consistency for spatio-temporal detection (BMVC 2017 oral)

- **Activity Recognition**

Proposed and implemented temporal regression and unit feature for activity classification/detection (ICCV 2017)

Institute for Robotics and Intelligent Systems, USC (May 2015 - Feb. 2017)
Project : GLAIVE/JANUS Unconstrained Face Recognition

- **Face Detection**

Proposed a cascade of fully convolutional network (FCN) for face detection. Achieved state-of-the-art performance on public datasets like AFW, PASCAL face etc (ICPR 2016)

PUBLICATION

Yang, Z., Wang, P., Wang, Y., Xu, W., Nevatia, R. Every Pixel Counts: Unsupervised Geometry Learning with Holistic 3D Motion Understanding. arXiv preprint 2018

Yang, Z., Wang, P., Wang, Y., Xu, W., Nevatia, R. LEGO: Learning Edge with Geometry all at Once by Watching Videos. CVPR 2018 (spotlight)

Wang, Y., Yang, Y., **Yang, Z.**, Zhao, L., Wang, P. and Xu, W., 2017. Occlusion Aware Unsupervised Learning of Optical Flow. CVPR 2018

Yang, Z., Wang, P., Xu, W., Zhao, L., Nevatia, R. Unsupervised Learning of Geometry with Edge-aware Depth-Normal Consistency. AAAI 2018 (oral).

Kim, K.*, **Yang, Z.***, Masi, I., Nevatia, R., Medioni, G. Face and Body Association for Video-based Face Recognition. WACV 2018.

Gao, J.*, **Yang, Z.***, Sun, C., Chen, K., Nevatia, R. TURN TAP: Temporal Unit Regression Network for Temporal Action. ICCV 2017.

Yang, Z., Gao, J., Nevatia, R. Spatio-Temporal Action Detection with Cascade Proposal and Location Anticipation. BMVC 2017 (oral).

Gao, J., Sun, C., **Yang, Z.**, Nevatia, R. TALL: Temporal Activity Localization via Language Query. ICCV 2017 (spotlight)

Yang, Z., Nevatia, R. A Multi-Scale Cascade Fully Convolutional Network Face Detector. ICPR 2016

SERVICE

Reviewer of: WACV 2019, ECCV workshop 2018, CVPR 2018, AAAI 2018, ACCV 2018, ACM MM 2017, ICCV workshop 2017;
Technical committee: ICCV CHI workshop 2017

SKILLS

Languages: PYTHON, MATLAB, C++ • Deep learning tools: PYTORCH, TENSORFLOW, CAFFE2, MXNET • Misc: Git, \LaTeX