Kai KANG

myfavouritekk@gmail.com

kangk.ai

Research Interests

Deep Learning, Computer Vision, Video Object Detection, Crowd Analysis

Education

10/2017 - present	**Apple Inc.**, Cupertino, CA USA Video Engineering Computer Vision & Machine Learning Engineer
08/2013 - 09/2017	**The Chinese University of Hong Kong**, Hong Kong Department of Electronic Engineering Thesis: Intelligent Video Analysis with Deep Learning Degree: PhD
09/2009 - 07/2013	**University of Science and Technology of China**, Hefei, Anhui, China School of the Gifted Young Degree: B.S. in Optics with an honor degree (top 5%)

Awards & Honors

2016 **Winner** (CUVideo, **first author**), **ImageNet** Large Scale Visual Recognition Challenge 2016 (ILSVRC2016), Object detection from video/track with provided data.

2015 **Winner** (CUVideo, **first author**), **ImageNet** Large Scale Visual Recognition Challenge 2015 (ILSVRC2015), Object detection from video with provided data.

2012 **Best Software Tools Project** (team leader), International Genetically Engineered Machine (iGEM) Competition World Championship, MIT, Massachusetts, USA

2012 **Gold Medal** (team leader), International Genetically Engineered Machine (iGEM) Competition Asia Jamboree, HKUST, Hong Kong

2013 First Outstanding Graduates with Honor Degrees (**top 5%**), University of Science and Technology of China

2012 Innovation Scholarship, Institute of Physics, Chinese Academy of Sciences

Publications

1 **Kang, K.**, Ouyang, W., Li, H., & Wang, X. (2016). Object Detection from Video Tubelets with Convolutional Neural Networks. CVPR, 2016. (**Spotlight**)

2 **Kang, K.**, Li, H., Xiao, T., Ouyang, W., Yan, J., Liu, X., & Wang, X. (2017). Object Detection in Videos with Tubelet Proposal Networks. CVPR, 2017.

3 **Kang, K.***, Li, H.*, Yan, J., Zeng, X., Yang, B., Xiao, T., ... & Ouyang, W. (2017). T-CNN: Tubelets with Convolutional Neural Networks for Object Detection from Videos. TCSVT Special Issue on Large Scale and Nonlinear Similarity Learning for Intelligent Video Analysis. (**Winning** method for ILSVRC 2015 challenge)

4 **Kang, K.**, & Wang, X. (2014). Fully Convolutional Neural Networks for Crowd Segmentation. arXiv preprint arXiv:1411.4464.

5 Shao, J., **Kang, K.**, Loy, C. C., & Wang, X. (2015, June). Deeply Learned Attributes for Crowded Scene Understanding. CVPR, 2015 (**Oral**)

6 Shao, J., Loy, C. C., **Kang, K.**, & Wang, X. (2016). Slicing Convolutional Neural Network for Crowd Video Understanding. CVPR, 2016. (**Spotlight**)

7 Zhang, C., **Kang, K.**, Li, H., Wang, X., Xie, R., & Yang, X. (2016). Data-driven Crowd Understanding: a Baseline for a Large-scale Crowd Dataset. IEEE Trans on Multimedia.

8 Shao, J., Loy, C. C., **Kang, K.**, & Wang, X. (2016). Crowded Scene Understanding by Deeply Learned Volumetric Slices. T-CSVT, 2016.

Experiences

02/2012 - 11/2012	Team leader of USTC-Software team participating in iGEM competition (International Genetically Engineered Machine Competition) Project Topic: Reverse Engineering for Biological Regulatory Networks Medal: Gold Medal Prize: **Best Software Tools Project**
08/2013 - 09/2017	PhD in Electronic Engineering Advisor: Prof. Xiaogang Wang Research topics: deep learning and computer vision 1. surveillance crowd analysis 2. object detection in videos (**ImageNet VID Winner 2015, 2016**)
10/2017 - present	Computer Vision & Machine Learning Engineer at Apple Inc. Antispoofing for **Face ID**

Featured Open-source Projects (GitHub)

vdetlib	First open-source Python library for ImageNet object detection from video challenge
T-CNN	**Winning** project for ImageNet 2015 object detection from video challenge
REBORN	**Winning** project for iGEM 2012 Best Software Tools

Skills

Programming	Python, C, C++, MATLAB, Mathematica
Web development	HTML, CSS, JavaScript