

SHUANGJIE XU

✉ shuangjiexu@gmail.com · ☎ (+86) 182-0277-3660 · 🌐 shuangjie

🎓 EDUCATION

Huazhong University of Science and Technology (HUST), Wuhan, China 2016 – 2019

M.S. in School of Electronic Information and Communications (EIC), GPA: 85.46

Huazhong University of Science and Technology (HUST), Wuhan, China 2012 – 2016

B.S. in EIC, GPA: 86.2, Rank: 9/216 (Top 5%)

👥 EXPERIENCE

Deeproute.ai Jul. 2019 – Now

LiDAR Perception staff 3D object detection / 3D semantic segmentation / LiDAR denoise

Develop high performance algorithms of 3D object detection / 3D semantic segmentation; Rain noise removal in LiDAR point cloud.

- Acquire the 1st place of the Kitti Dataset and SemanticKitti Dataset
- Publish a paper about 3D object detection in CVPR 2020

Tencent AI Lab Internship Mar. 2018 – Jul. 2018

Computer Vision Center staff video object segmentation direction

Develop high performance algorithms of video object segmentation task

- Acquire the 3rd place of the DAVIS 2018 challenge in CVPR workshop
- Publish two paper about this work as the first author in CVPRW 2018 and CVPR oral 2020

Multi-scale Crowd Counting in Surveillance Image Aug. 2017 – Nov. 2017

Principal Researcher Cooperation: IBM Research

Apply a novel multi-scale network to obtain a high-quality density map estimation for arbitrary input scenes

- Acquire the state of the art performance in the Shanghaitech dataset

On-line Monitoring of Unsafe Acts in Construction Site Jun. 2017 – Jan. 2018

Project Leader Cooperation: School of Civil Engineer & Mechanics, HUST; Wuhan Metro

- The overall framework design. Three components have been proposed with interface defined, including video streaming capturing, deep learning algorithm and management website
- Optimize detection algorithm based on yolo v2, achieving the detection accuracy more than 90 percent of person, hardhat and building machinery in a speed of 27FPS
- Participate in website development. With Django and HLS live streaming protocol, our website is able to play the detection results of surveillance video in real time.

Person Re-Id in Surveillance Video Nov. 2016 – Mar. 2017

Principal Researcher Cooperation: IBM Research

Introduce attention mechanism in the first time to fix person re-id task well. Published in ICCV 17.

📖 PUBLICATIONS

- Jointly Attentive Spatial-Temporal Pooling Networks for Video-based Person Re-Identification, **Shuangjie Xu**, Yu Cheng, Kang Gu, Shiyu Chang, Pan Zhou, In ICCV 2017.
- MHP-VOS: Multiple Hypotheses Propagation for Video Object Segmentation, **Shuangjie Xu**, Daizong Liu, Linchao Bao, Wei Liu, Pan Zhou, In CVPR 2019.
- HVNet: Hybrid Voxel Network for LiDAR Based 3D Object Detection, Maosheng Ye, **Shuangjie Xu**, Tongyi Cao, In CVPR 2020.

- Class-Agnostic Video Object Segmentation without Semantic Re-Identification, **Shuangjie Xu**, Linchao Bao, Pan Zhou, In CVPR workshop 2018.
- A Deep Learning-based Approach for Mitigating Falls from Height with Computer Vision: Convolutional Neural Network Accepted Version, Weili Fang, Botao zhong, Neng Zhao, Peter Love, Hanbin Luo, Jiayue Xue, **Shuangjie Xu**. Advanced Engineering Informatics. 39. 10.1016/j.aei.2018.12.005.
- A 3D-CNN and LSTM based multi-task learning architecture for action recognition, Xi Ouyang, **Shuangjie Xu**, Caoyun Zhang, Pan Zhou, Yang Yang, IEEE Access 7, 40757-40770.
- SAANet: Siamese action-units attention network for improving dynamic facial expression recognition, Daizong Liu, Xi Ouyang, **Shuangjie Xu**, Pan Zhou, Kun He, Neurocomputing 413, 145-157.

♡ HONORS AND AWARDS

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| • National Scholarship | Oct. 2015 |
| • 3rd place in DAVIS 2018 challenge | Jun. 2018 |
| • 1st place in Kitti | Nov. 2019 |
| • 1st place in SemanticKitti | May 2020 |