Buyu Li

Curriculum Vitae

✉ *libuyu_braiten@outlook.com*
https://libuyu.github.io

Education

2012–2016 **Department of Electronic Engineering, Tsinghua University**, *Bachelor of Engineering*, Beijing, China.

2017–present **Department of Electronic Engineering, The Chinese University of Hong Kong**, *PhD Student*, Hong Kong.
Working at Multimedia Laboratory and researching in the area of computer vision.

Work Experience

2016–2017 **Sensetime Research**, *Computer Vision Researcher*, Beijing, China.

* I joined the group for the competition of ILSVRC2016. Our team won the 1st in both task 1a and 1b.

* In the intelligent video project, I was responsible for the pedestrian key-point estimation module and improved the algorithm accuracy by around 20% compared with the last version with no loss of speed.

Research & Projects

AAAI 2019 (Oral) **Gradient Harmonized Single-stage Detector**, ***Buyu Li****, *Yu Liu**, *Xiaogang Wang*.

* We first point out that the essential effect of the two states of disharmony can be summarized in term of the gradient. Further, we propose a novel gradient harmonizing mechanism to be a hedging for the disharmony.
* Code is availible at `https://github.com/libuyu/GHM_Detection`

CVPR 2019 **GS3D: An Efficient 3D Object Detection Framework for Autonomous Driving**, ***Buyu Li***, *Wangli Ouyang, Lu Sheng, Xingyu Zeng, Xiaogang Wang*.

* We present an efficient 3D object detection framework based on a single RGB image in the scenario of autonomous driving.

CVPR 2019 **Grid R-CNN**, *Xin Lu, **Buyu Li**, Yuxin Yue, Quanquan Li, Junjie Yan*.

* This paper proposes a novel object detection framework named Grid R-CNN, which adopts a grid guided localization mechanism for accurate object detection.

AAAI 2020 **Monocular 3D Object Detection with Decoupled Structured Polygon Estimation and Height-Guided Depth Estimation**, *Yingjie Cai, **Buyu Li**, Zeyu Jiao, Hongsheng Li, Xingyu Zeng, Xiaogang Wang*.

* this paper proposes a novel unified framework which decomposes the detection problem into a structured polygon prediction task and a depth recovery task.

CVPR 2020 **Equalization Loss for Long-Tailed Object Recognition**, *Jingru Tan, Changbao Wang, Buyu Li, Quanquan Li, Wanli Ouyang, Changqing Yin, Junjie Yan*.

* We propose a simple but effective loss, named equalization loss, to tackle the problem of long-tailed rare categories. With the utilization of the effective equalization loss, we finally won the 1st place in the LVIS Challenge 2019.
* Code is availible at `https://github.com/tztztztztz/eql.detectron2`