

LEI KE

HKUST, Clear Water Bay, Kowloon, Hong Kong

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EDUCATION

The Hong Kong University of Science and Technology (HKUST) *Sept 2019 - Present*
Ph.D. Student in Computer Vision, Computer Science and Engineering
Advisor: Prof. Chi-Keung TANG, IEEE Fellow

Wuhan University, China *Sept 2014 - June 2018*
Bachelor of Software Engineering, Computer Science School GPA: 3.65/4.0, Top 5%

RESEARCH INTEREST

- Instance Segmentation & Object Tracking
- Scene Understanding and Reconstruction

PUBLICATIONS

Deep Occlusion-Aware Instance Segmentation with Overlapping BiLayers.

Lei Ke, Yu-Wing Tai, Chi-Keung Tang.

IEEE Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2021.

GSNet: Joint Vehicle Pose and Shape Reconstruction with Geometrical and Scene-aware Supervision.

Lei Ke., Shichao Li, Yanan Sun, Yu-Wing Tai, Chi-Keung Tang.

The European Conf. on Computer Vision (**ECCV**), 2020.

Commonality-Parsing Network across Shape and Appearance for Partially Supervised Instance Segmentation.

Qi Fan*, **Lei Ke***, Wenjie Pei, Chi-Keung Tang, Yu-Wing Tai.

The European Conf. on Computer Vision (**ECCV**), 2020. * denotes equal contribution.

Cascaded Deep Monocular 3D Human Pose Estimation with Evolutionary Training Data.

Shichao Li, **Lei Ke**, Kevin Pratama, Yu-Wing Tai, Chi-Keung Tang, Kwang-Ting Cheng.

IEEE Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2020, **Oral presentation.**

Reflective Decoding Network for Image Captioning.

Lei Ke, Wenjie Pei, Ruiyu Li, Xiaoyong Shen, Yu-Wing Tai.

IEEE International Conf. in Computer Vision (**ICCV**), 2019.

Memory-Attended Recurrent Network for Video Captioning.

Wenjie Pei, Jiyuan Zhang, Xiangrong Wang, **Lei Ke**, Xiaoyong Shen and Yu-Wing Tai.

IEEE Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2019.

EXPERIENCE

HKUST, Hong Kong | PhD Student

Sept 2019 - Present

Advisor: Prof. Chi-Keung TANG

Worked on 3D traffic scene reconstruction (including joint vehicle pose and dense shape reconstruction from monocular image) & 2D instance segmentation under the partially supervised setting. Both the proposed GSNet and CPMask have been accepted by ECCV 2020.

Tencent Youtu X-Lab, Shenzhen | Reseach Intern

Nov 2017 - Aug 2019

Advisor: Prof. Yu-Wing TAI

Worked on image and video captioning. Proposed the Reflective Decoding Network (RDN) for image captioning, accepted by ICCV2019, which enhances both the long sequence dependency and position perception of words in a caption decoder, achieving the state-of-the-art performance in both standard and complicated image captioning.

Alibaba Group, Hangzhou | Engineering Intern

June 2017 - Oct 2017

Worked on the product data mining and recommendation system for Taobao department.

Wuhan University, Wuhan | Research Assistant

May 2016 - Feb 2017

Advisor: Prof.Xiaohui Cui

Utilized traditional machine learning algorithms to conduct the sentiment analysis with social media data.

AWARDS

- Research Travel Grant, HKUST *2019*
- Postgraduate Studentship, HKUST *2019-present*
- COMAP's Mathematical Contest in Modeling, Honorable Prize. *2017*
- Excellent Student Scholarship, Wuhan University *2015-2017*
- National Software Design Competition, Second Prize. *2017*
- National Inspirational Scholarship, Wuhan University *2016*
- National College Students' Mathematics Competition, Third Prize *2015*

SKILLS AND INTERESTS

- Deep Learning Platform: PyTorch, TensorFlow, Caffe and MXNet
- Language: Mandarin(native), English(fluent)
- Programming Language: Python, C/C++, Java, C#, JavaScript.