

# Zhengkai Jiang

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## Personal Profile

Self-motivated deep learning algorithm researcher at Tencent Youtu Lab. I have publish several papers on top conferences such as NeurIPS, CVPR, ECCV and AAAI. My research interests mainly lie in object detection, video understanding and generative model.

## Research Interest

- Object Detection, Instance Segmentation, Video Understanding, Image-to-Image Translation

## Education

**2017-2020 University of Chinese Academy of Sciences**  
National Laboratory of Pattern Recognition,  
Institute of Automation, Chinese Academy of Sciences, Beijing, China  
Master in Pattern Recognition and Intelligent System, Supervisor: Prof.Shiming Xiang  
Overall GPA: 3.7/4.0, Ranking: **Top 5%**  
Fields: Computer Vision and Deep Learning

**2013-2017 Bachelor of Automation**  
Northeastern University, Shenyang, China  
Overall GPA: 91.3/100, Ranking: **1/37**(2/248)

## Experience

**Jul. 2020 - Now Tencent Youtu Lab**  
Full-Time Researcher, Shanghai, China  
Topic: Image and Video Understanding

**Apr. 2019 - Apr. 2020 Megvii Research**  
Research Intern, Beijing, China  
Topic: General Object Detection, Mentored by Dr. Gang Yu and Zeming Li

**Jan. 2018 - Mar. 2019 Horizon Robotics**  
Research Intern, Beijing, China  
Topic: Video Object Detection, Mentored by Dr. Qian Zhang

**Mar. 2017 - Sep. 2017 Sensetime Research**  
Research Intern, Beijing, China  
Topic: Pedestrian Attribute Classification, Mentored by Dr. Jing Shao

## Selected Projects

### Jul. 2020 - Dec. 2020    **Gaze Redirection**

We propose a novel flow-based Ugaze network to redirect the gaze to the camera not the screen to improve the eye contact. World's first eye contact is online at Tencent Meeting

## Publication

### Conference

- **AutoAssign: Differentiable Label Assignment for Dense Object Detection**  
Benjin Zhu, Jianfeng Wang, **Zhengkai Jiang**, Fuhang Zong, Songtao Liu, Zeming Li, Jian Sun  
In Submission
- **Fine-Grained Dynamic Routing for Object Detection**  
Lin Song, Yanwei Li, **Zhengkai Jiang**, Zeming Li, Hongbin Sun, Jian Sun, Nanning Zheng  
Conference on Neural Information Processing Systems (NeurIPS), 2020
- **Rethinking Learnable Tree Filter for Generic Feature Transform**  
Lin Song, Yanwei Li, **Zhengkai Jiang**, Zeming Li, Xiangyu Zhang, Hongbin Sun, Jian Sun, Nanning Zheng  
Conference on Neural Information Processing Systems (NeurIPS), 2020
- **Learning Where to Focus for Efficient Video Object Detection**  
**Zhengkai Jiang**, Yu Liu, Ceyuan Yang, Jihao Liu, Peng Gao, Qian Zhang, Shiming Xiang, Chunhong Pan  
European Conference on Computer Vision (ECCV), 2020
- **Class-balanced Grouping and Sampling for Point Cloud 3D Object Detection**  
Benjin Zhu, **Zhengkai Jiang**, Xiangxin Zhou, Zeming Li, Gang Yu  
NuScenes Winner in IEEE Conference on Computer Vision and Pattern Recognition (CVPR) WAD Workshop, 2019
- **Dynamic Fusion with Intra- and Inter- Modality Attention Flow for Visual Question Answering**  
Peng Gao, **Zhengkai Jiang**, Haoxuan You, Pan Lu, Steven Hoi, Xiaogang Wang, Hongsheng Li  
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2019, **Oral**
- **Video Object Detection with Locally-Weighted Deformable Neighbours**  
**Zhengkai Jiang**, Peng Gao, Chaoxu Guo, Qian Zhang, Shiming Xiang, Chunhong Pan  
Association for the Advancement of Artificial Intelligence (AAAI), 2019

## Academic Competitions

- **1st at the Objects 365 Challenge, 2020**
- **1st at the NuScenes 3D Detection of CVPR WAD workshop, 2019**
- **3rd at the Instance Segmentation of ECCV COCO Workshop, 2018**

## Honors and Awards

- **Outstanding Student in Institution of Automation, Chinese Academy of Sciences, 2020**
- **Outstanding Student in Institution of Automation, Chinese Academy of Sciences, 2019**
- **Excellent Graduate in Liaoning Province, 2017**
- **1st class Scholarship of Northeastern University, 2014, 2016**
- **2nd Prize on National Mathematical Contest in Modeling(in China), 2015**
- **3st Prize on Final Chinese Mathematics Competitions(in Fuzhou, China), 2016**
- **1st Prize on Chinese Mathematics Competitions(in Shenyang, China), 2015**

- 2st Prize on Final Chinese Mathematics Competitions(in Wuhan, China), 2015
- 1st Prize on Chinese Mathematics Competitions(in Shenyang, China), 2015
- National Scholarship (Top 0.2% students in China), 2016
- National Scholarship (Top 0.2% students in China), 2015
- National Scholarship (Top 0.2% students in China), 2014

## Professorial Services

### Conference Reviewer

- Association for the Advancement of Artificial Intelligence, 2021
- International Conference on Computer Vision and Pattern Recognition, 2021

### Journal Reviewer

- International Journal of Computer Vision

## Skills

<b>Programming Languages</b>	Python, C++
<b>Deep Learning Frameworks</b>	PyTorch, Mxnet, Caffe
<b>Backend Framework</b>	CUDA, MPI
<b>Languages</b>	Chinese, English