

TETE XIAO

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EDUCATION

Peking University, Beijing, China (2015.9 - present)
B.S., Department of Intelligence Science, School of Electronics Engineering and Computer Science
GPA: 3.77 / 4
Core Courses: Advanced Mathematics (94 & 100), Linear Algebra (91), Introduction to Computing (93),
Practice of Programming in C&C++ (100), Data Structure and Algorithms (91)

PUBLICATIONS

1. *Jiayuan Mao, ***Tete Xiao**, Yuning Jiang and Zhimin Cao (*: indicates equal contribution)
What Can Help Pedestrian Detection,
IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2017), July 2017.
2. *Chao Peng, ***Tete Xiao**, *Zeming Li, Yuning Jiang, Xiangyu Zhang, Kai Jia, Gang Yu
and Jian Sun (*: indicates equal contribution)
LBDet: A Large Batch Object Detector,
Submitted to IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2018),
Winner of the COCO 2017 Detection Challenge.
3. Xinlong Wang, **Tete Xiao**, Yuning Jiang, Shuai Shao, Jian Sun and Chunhua Shen
Repulsion Loss: Detecting Pedestrians in a Crowd,
Submitted to IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2018).

ACADEMIC COMPETITIONS

1. *Chao Peng, ***Tete Xiao**, *Zeming Li, Yuning Jiang, Xiangyu Zhang, Kai Jia, Gang Yu
and Jian Sun (*: indicates equal contribution)
Megvii (Face++),
Winner of the COCO 2017 Detection Challenge.
2. ***Tete Xiao**, *Ruixuan Luo, *Borui Jiang, Shuai Shao, Yuning Jiang, Yadong Mu, Jieqi Shi,
Chi Zhang and Jian Sun (*: indicates equal contribution)
Megvii (Face++) and Peking University,
Winner of the Places 2017 Instance Segmentation Challenge.
3. Yilun Chen*, Zhicheng Wang*, Yuxiang Peng, Zhiqiang Zhang, Gang Yu, Chao Peng,
Tete Xiao, Zeming Li, Yuning Jiang, Xiangyu Zhang, Jian Sun (*: indicates equal contribution)
Megvii (Face++),
Winner of the COCO 2017 Human Keypoint Challenge.
4. Ruixuan Luo*, Borui Jiang*, **Tete Xiao***, Chao Peng*, Yuning Jiang, Zeming Li,
Xiangyu Zhang, Gang Yu and Jian Sun (*: indicates equal contribution)
Megvii (Face++) and Peking University,
Runner-up of the COCO 2017 Instance Segmentation Challenge.

EXPERIENCE & PROJECTS

Senior Research Intern in Computer Vision (2015.12 - present)
Mentor: Mr. Yuning Jiang, Lead Researcher, Megvii (Face++) Research
Supervisor: Dr. Jian Sun, Chief Scientist, Megvii (Face++) Research

Project I: General Object Detection and Instance Segmentation (2017.4 - 2017.10)

- Proposed a warm-up policy and cross-GPU batch normalization algorithm which enable us to train a large batch object detector by Megvii (Face++)'s large-scale deep learning framework using up to 128 GPUs in parallel.
- For detection, the framework was designed following Feature Pyramid Network. Sophisticated context modules and instance-blind segmentation supervision were also applied.
- For instance segmentation, proposed the Precise RoI Pooling and the Inverse RoI Pooling to accurately sample feature points and map sampling points to feature points. Context modules were also used.
- The two framework won the champions of COCO 2017 Detection Challenge and Places 2017 Instance Segmentation Challenge, and the runner-up of COCO 2017 Instance Segmentation Challenge.

Project II: Pedestrian Detection (2017.7 - 2017.11)

- Explored how pedestrian detectors are harmed by crowd occlusion. Moreover, proposed a novel loss function, which was able to prevent predicted boxes from shifting to its neighboring objects in crowd scenes.
- Achieved state-of-the-art performance on several challenging datasets and benchmarks. It was also useful for general object detection.
- Paper "Repulsion Loss: Detecting Pedestrians in a Crowd" was submitted to CVPR 2018.

Project III: Pedestrian Detection (2016.6 - 2016.11)

- Explored how aggregating extra features can help CNN-based pedestrian detection framework and proposed a novel network architecture, which was able to utilize the information of given features and improve detection performance without extra inputs in inference.
- Paper "What Can Help Pedestrian Detection" was accepted to CVPR2017.

Research Assistant in Computer Vision (2016.5 - present)

Supervisor: Dr. Yadong Mu, Machine Intelligence Lab, Institute of Computer Science and Technology, Peking University

Project I: Instance Segmentation (jointly work with Megvii Research) (2017.4 - 2017.10)

- See above.

Project II: Traffic Light Detection for Autonomous Car (2016.11 - 2016.12)

- Implemented a Faster-RCNN detector for small objects. Used context cropping, dilated convolution and scale jittering to boost performance for small objects.
- The framework won the second award at CCF Big Data Challenge 2016.

COMPETITIONS

1. Gold Medal, ACM International Collegiate Programming Contest (ACM-ICPC) Asia Regional, 2016.11
2. Gold Medal, "Surpass Cup" Peking University Programming Contest, 2016.5
3. Bronze Medal, National Olympiad in Informatics, 2014.8
4. Champion, Shandong Province Team Selection Contest, 2014.5

HONORS & AWARDS

1. China National Scholarship, Peking University, 2015 - 2016
2. The Scholarship for the Outstanding Talented, Peking University, 2017.6
3. Merit Student, Peking University, 2015 - 2016

LEADERSHIP & ACTIVITIES

1. Assistant Coach of Team PKU at ACM/ICPC World Final 2017, Rapid City, U.S., where we ranked **7** worldwide and won a **silver medal**.