

# TETE XIAO

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## EDUCATION

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**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

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

## ACADEMIC COMPETITIONS

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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*,  
**First runner-up** of the COCO 2017 Instance Segmentation Challenge.

## EXPERIENCE & PROJECTS

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**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

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1. Gold Medals, ACM International Collegiate Programming Contest (ACM-ICPC) Asia Regional, 2016.11 & 2017.11
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

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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

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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**, the second best record of the university.