Yihui He

CONTACT INFORMATION	Computer Science Xi'an Jiaotong University Xi'an, 710049, China	*Phone:* (+86) 18702937918 *E-mail:* yihuihe.yh@gmail.com *WWW:* yihui-he.github.io

RESEARCH INTERESTS

CNN Acceleration and Compression [1, 2, 4], reinforcement learning [2], Super Resolution [5], Detection [1], Depth [7], Structure from Motion, Panorama, Security Game [3], HTTP [6]

EDUCATION

University of California, Santa Babara, CA   Spring 2016

Exchange student, Computer Science, GPA 4.0/4.0

Xi'an Jiaotong University, Xi'an, China   2014-2018

Bachelor, Computer Science, GPA 81.4/100 (1st/2nd/3rd year rank: 22%/4%/37%)

PUBLICATION

[1] **Yihui He**, Xiangyu Zhang, and Jian Sun. "Channel Pruning for Accelerating Very Deep Neural Networks". In: *The IEEE International Conference on Computer Vision (**ICCV**)*. Oct. 2017. [CVF open access] [arXiv] [Code].

UNDER REVIEW

[2] **Yihui He** and Song Han. "ADC: Automated Deep Compression and Acceleration with Reinforcement Learning". In: *The IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**)* (2018). [private link].

[3] Xiaobo Ma*, **Yihui He***, Xiapu Luo, Jianfeng Li, Mengchen Zhao, Bo An, and Xiaohong Guan. "Vehicle Traffic Driven Camera Placement for Better Metropolis Security Surveillance". In: *IEEE Intelligent Systems (**IS**)* (2016). **Major Revision**, *Equal contribution, [arXiv].

[4] **Yihui He**, Xiangyu Zhang, and Jian Sun. "Pruning very deep neural network channels for efficient inference". In: *IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**)* (2017). [private link].

[5] Yudong Liang, Ze Yang, Kai Zhang, **Yihui He**, Jinjun Wang, and Nanning Zheng. "Single Image Super-Resolution with a Parameter Economic Residual-Like Convolutional Neural Network". In: *IEEE Transactions on Multimedia (**TMM**)* (2017). [arXiv].

[6] Hongwei Zhao, Xiaobo Ma, Shuai Li, Xiaopu Luo, Mawei Shi, and **Yihui He**. "Boosting the performance of dynamic adaptive streaming over http in bandwidth-fluctuation networks: A pid-based approach". In: *IEEE International Conference on Multimedia and Expo (**ICME**)* (2017). [private link].

PROJECT REPORT

[7] **Yihui He**. *Estimated Depth Map Helps Image Classification*. May 2016. [arXiv] [Code].

SERVICES

Reviewer for TIP (IEEE Transactions on Image Processing).

WORK EXPERIENCE

Johns Hopkins University   Sept, 2017 - present
Visiting Student
- Automated CNN compression [2], with Song Han. Successfully compressed NASNet.
- Visual concepts for fewshot detection, with Alan Yuille. Detectors emerged from visual concepts.

Megvii Inc. (Face++)   Sept, 2016 - Aug, 2017
Research Intern with Xiangyu Zhang and Jian Sun
- Pruning CNN channels [1, 4]. VGG-16 5× with negligible accuracy loss.

- Head boxes aided pedestrian detection. Distinguish overlapped pedestrians by detecting heads.

Deepglint Inc.   May 2016 - Aug 2016
Research Intern
- Gastrointestinal stromal tumor Image Segmentation.

DJI Innovations Science and Technology Co., Ltd   May 2015 - Aug 2015
Engineering Intern
- Build prototype robots and program embedded system.

OTHER   **Xi'an Jiaotong University**

EXPERIENCE   *Undergrad Researcher* in Computer Vision and AI Lab
- Super resolution [5].

Undergrad Researcher in MoE Key Lab for Intelligent Network and Network Security
- Traffic driven camera placement [3].
- PID-based streaming over http [6].

Baidu Big Data Lab Joint Cultivation student
- Data mining on large scale location data.

HONORS AND   RoboCup Junior Soccer Challenge, 1st place, 2014
AWARDS   Outstanding student, Xi'an Jiaotong University, 2016
                Siyuan scholarship, Xi'an Jiaotong University, 2016-2017

SKILLS   Deep Learning   compression, U-net, Depth, GAN, ResNet (515 stars on Github)
                GPU (CUDA) and C   depthwise-conv, c compiler (44 stars on Github)
                Multi-view Geometry   panorama, SfM, notes (71 stars on Github)
                NLP   NER, RNN, notes (36 stars on Github)

EXTRACURRICULAR Writer in Zhihu with 3k followers
                Go Amateur 2 dan
                StarCraft II ranked Diamond