

# Yihui He

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CONTACT INFORMATION	Carnegie Mellon University Pittsburgh, PA 15213	<i>E-mail:</i> <a href="mailto:yihuihe.yh@gmail.com">yihuihe.yh@gmail.com</a> <i>Website:</i> <a href="http://yihui-he.github.io">yihui-he.github.io</a>
RESEARCH INTERESTS	CNN Acceleration and Compression [2, 1, 4], Reinforcement Learning [1], Super Resolution [5], Detection [2], Depth [7], Structure from Motion, Panorama, Security Game [3], HTTP [6]	
EDUCATION	<b>Carnegie Mellon University</b>	2018 - 2019
	Master, Computer Vision	
	<b>University of California, Santa Babara</b>	Spring 2016
	Exchange student, Computer Science, GPA 4.0/4.0	
	<b>Xi'an Jiaotong University</b>	2014 - 2018
	Bachelor, Computer Science, GPA 81.4/100 (1st/2nd/3rd year rank: 22%/4%/37%)	
PUBLICATIONS	<ul style="list-style-type: none"><li>[1] <b>Yihui He</b>, Ji Lin, Zhijian Liu, Hanrui Wang, Li-Jia Li, and Song Han. “AMC: AutoML for Model Compression and Acceleration on Mobile Devices”. In: <i>European Conference on Computer Vision (ECCV)</i>. Sept. 2018. cited by <b>5</b>, [<a href="#">arXiv</a>].</li><li>[2] <b>Yihui He</b>, Xiangyu Zhang, and Jian Sun. “Channel Pruning for Accelerating Very Deep Neural Networks”. In: <i>The IEEE International Conference on Computer Vision (ICCV)</i>. Oct. 2017, pp. 1389–1397. cited by <b>58</b>, [<a href="#">PDF</a>] [<a href="#">arXiv</a>] [<a href="#">Code</a>].</li><li>[3] Xiaobo Ma*, <b>Yihui He*</b>, Xiapu Luo, Jianfeng Li, Mengchen Zhao, Bo An, and Xiaohong Guan. “Vehicle Traffic Driven Camera Placement for Better Metropolis Security Surveillance”. In: <i>IEEE Intelligent Systems (IS)</i>. 2018. *Equal contribution, [<a href="#">PDF</a>] [<a href="#">arXiv</a>].</li></ul>	
UNDER REVIEW	<ul style="list-style-type: none"><li>[4] <b>Yihui He</b>, Xiangyu Zhang, and Jian Sun. “Pruning Very Deep Neural Network Channels for Efficient Inference”. In: <i>IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)</i> (2017). <b>Major Revision</b>.</li><li>[5] Yudong Liang, Ze Yang, Kai Zhang, <b>Yihui He</b>, Jinjun Wang, and Nanning Zheng. “Single Image Super-resolution via a Lightweight Residual Convolutional Neural Network”. In: <i>IEEE Transactions on Multimedia (TMM)</i> (2017). cited by <b>6</b>, [<a href="#">arXiv</a>].</li><li>[6] Hongwei Zhao, Xiaobo Ma, Shuai Li, Xiaopu Luo, Mawei Shi, and <b>Yihui He</b>. “Boosting the performance of dynamic adaptive streaming over http in bandwidth-fluctuation networks: A pid-based approach”. In: <i>IEEE International Conference on Multimedia and Expo (ICME)</i> (2018).</li></ul>	
PROJECT REPORT	<ul style="list-style-type: none"><li>[7] <b>Yihui He</b>. <i>Estimated Depth Map Helps Image Classification</i>. May 2016. [<a href="#">arXiv</a>] [<a href="#">Code</a>].</li></ul>	
SERVICE	<b>Reviewer</b> for IEEE Transactions on Image Processing ( <b>TIP</b> , AE: Prof. <a href="#">Jie Liang</a> ).	
RESEARCH EXPERIENCE	<b>MIT</b>	Oct, 2017 - Dec, 2017
	<i>Research Assistant with Prof. <a href="#">Song Han</a></i> <ul style="list-style-type: none"><li>• Automated CNN compression [1]. Successfully compressed NASNet, MobileNet.</li></ul>	
	<b>Johns Hopkins University</b>	Aug, 2017 - Nov, 2017
	<i>Research Assistant with Prof. <a href="#">Alan Yuille</a></i>	

- Visual concepts for fewshot detection. Detectors emerged from visual concepts.

#### **Megvii Inc. (Face++)**

Dec, 2016 - Aug, 2017

*Research Intern with Dr. [Xiangyu Zhang](#) and Dr. [Jian Sun](#)*

- Pruning CNN channels [2]. VGG-16  $5\times$  with negligible accuracy loss.
- Head boxes aided pedestrian detection. Distinguish overlapped pedestrians by detecting heads.
- Object detection with confidence scores on each edge of bounding box.

#### **Xi'an Jiaotong University**

*Undergrad Researcher in Computer Vision and AI Lab*

- Super resolution [5], supervised by [Jinjun Wang](#).

*Undergrad Researcher in Intelligent Network and Network Security Lab*

- Traffic driven camera placement [3], supervised by [Xiaopu Luo](#).
- PID-based streaming over http [6].

*Baidu Big Data Lab Joint Cultivation student*

- Data mining on large scale location data.

#### INDUSTRY EXPERIENCE

#### **Deepglint Inc.**

June 2016 - Aug 2016

*Engineering Intern*

- Gastrointestinal stromal tumor Image Segmentation.

#### HONORS AND AWARDS

Baidu Big Data and AI scholarship	2018
Siyuan scholarship, Xi'an Jiaotong University	2016-2017
Outstanding student, Xi'an Jiaotong University	2016
RoboCup Junior Soccer Challenge, 1st place	2014
RoboCup Junior Soccer Challenge, 3rd place	2012