

Ligeng Zhu

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Education

Massachusetts Institute of Technology, USA

Visiting student in Department of Electrical Engineering and Computer Science

Simon Fraser University, Canada

Bachelor in Department of Computing Science

Zhejiang University, China

Bachelor in Department of Computer Science.

Research Interests

Scalable & Efficient Machine Learning Design Automation Machine Learning Systems

Publications **Google Scholar (155 citations)**

Conferences

1. **Distributed Training Across the World.**
Ligeng Zhu, Yao Lu, Yujun Lin, Song Han
Manuscript, under submission.
2. **Deep Leakage from Gradients.**
Ligeng Zhu, Zhijian Liu, Song Han
In *Proceeding of 33rd Conference on Neural Information Processing Systems (NeurIPS)*, 2019.
3. **Proxylessnas: Direct neural architecture search on target task and hardware.**
Han Cai, Ligeng Zhu, Song Han.
In *Proceedings of the 7th International Conference on Learning Representations (ICLR)*. 2019.
122 citations / 849 stars on [Github](#) / Integrated into [PyTorch Hubs](#)
4. **Sparsely Aggregated Convolutional Networks.**
Ligeng Zhu, Ruizhi Deng, Michael Maire, Greg Mori, Ping Tan.
In *Proceedings of the 15th European Conference on Computer Vision (ECCV)*. 2018.
5. **Does Colour Really Matter? Evaluation via Object Classification.**
Brian Funt, Ligeng Zhu.
In *Proceedings of the 27th Color and Imaging Conference (CIC)*. 2018.
6. **Colorizing Color Images.**
Ligeng Zhu, Brian Funt.
In *Proceedings of the 30th Human Vision and Electronic Imaging (HVEI)*. 2018.
7. **Attribute Recognition from Adaptive Parts.**
Luwei Yang, Ligen Zhu, Yichen Wei, Shuang Liang, Ping Tan.
In *Proceedings of the 27th British Machine Vision Conference (BMVC)*. 2016.

Journals

1. **AutoML for Architecting Efficient and Specialized Neural Networks**
Song Han, Han Cai, Ligeng Zhu, Ji Lin, Kuan Wang, Zhijian Liu, Yujun Lin.
In *the IEEE International Symposium on Microarchitecture (Micro)*. 2019.
2. **Small Object Sensitive Segmentation of Urban Street Scene With Spatial Adjacency Between Object Classes**
Ligeng Zhu*, Dazhou Guo*, Yuhang Lu, Hongkai Yu, Song Wang
In *the IEEE Transactions on Image Processing (TIP)*. 2019.

Experiences

- | | |
|--|---|
| Intel Corporation
<i>Data Scientist@Artificial Intelligence Products Group</i> | Nov 2019 - Now
<i>Santa Clara, CA, USA</i> |
| Massachusetts Institute of Technology
<i>Research Assistant@Prof. Song Han's Group</i> | Sept 2018 - Aug 2019
<i>Cambridge, MA, USA</i> |
| <ul style="list-style-type: none">· Secure (NIPS 19) and scalable (ICLR 20, in submission) federated learning.· Efficient neural architecture search for hardware specialization (ICLR 19). | |
| Sensetime Inc
<i>Research Intern@Video Segmentation Group</i> | Jan 2018 - Aug 2018
<i>Beijing, China</i> |
| Research on color stability of videos, and modified winograd to accelerated fix-point inference. | |
| Simon Fraser University
<i>Research Assistant</i> | Sep 2015 - Aug 2018
<i>Vancouver, BC, Canada</i> |
| <ul style="list-style-type: none">· With Prof. Brian Funt at Color Vision Lab<ul style="list-style-type: none">• Automatic white-balancing via CNN (HVEI 18)• Color Important Analysis (CIC 18)· With Prof. Ping Tan at Graphic and Vision Lab<ul style="list-style-type: none">• Deep learning for simultaneously localization and recognition (BMVC 16). | |
| TuSimple Inc
<i>Research Intern@Self-driving Group</i> | May 2017 - Aug 2017
<i>San Diego, CA, USA</i> |
| <ul style="list-style-type: none">· (Patent): A system method for drivable road surface generation using multimodal sensor data· (Patent): A system method for detecting taillight signals of vehicles via convolutional neural network | |

Projects

Most of my research stand on the shoulders of giants named "open-source". Therefore, I embrace open-source as much as possible. According to gitstar ranking, I rank 3379th among all github users.

PyTorch-OpCounter (1.1k stars)	ProxylessNAS (853 stars)	Efficient-PyTorch (334 stars)
pytorch-memonger (206 stars)	SparseNet (121 stars)	fast-artistic-videos (96 stars)

For details, please refer to my [GitHub](#). Beside personal projects, I also contribute to

MXNet, PyTorch, TVM, Horovod, mmdetection.

Awards

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| • Open Source Scholarship , Simon Fraser University | 2017 |
| • Academic Scholarship , Simon Fraser University | 2017 |
| • ACM-ICPC Contest Silver Medal , Zhejiang University | 2015 |
| • Mathematical Contest In Modeling First Prize , Zhejiang University | 2015 |

Academic Services

Review(ed) papers for: CVPR 20 (going to) / AAAI 20 / Neruips 19 / ICCV 19 / CVPR 19