Yizeng Han

CONTACT INFORMATION
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RESEARCH INTERESTS
My research focuses on deep learning and computer vision, in particular dynamic neural networks and efficient learning/inference of deep models in resource-constrained scenarios.

EDUCATION

Ph.D, **Department of Automation, Tsinghua University** **2018 - Present**
Advisors: Shiji Song and Gao Huang

B.S., **Department of Automation, Tsinghua University** **2014 - 2018**
GPA Rank: 38/141

RESEARCH EXPERIENCE

Intern, Megvii Technology **04/2023 - Present**
Advisor: Xiangyu Zhang

Intern, Georgia Institute of Technology **06/2017 - 8/2017**
Advisor: Gregory D Abowd

AWARDS & HONORS

- National Scholarship, Ministry of Education of China 2022
- Comprehensive Merit Scholarship, Tsinghua University 2017 & 2016
- Academic Excellence Scholarship, Tsinghua University 2015

PUBLICATIONS & PREPRINTS

1. **Yizeng Han***, Gao Huang*, Shiji Song, Le Yang, Honghui Wang, Yulin Wang. Dynamic neural networks: a survey. *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), 2021.
2. **Yizeng Han**, Gao Huang, Shiji Song, Le Yang, Yitian Zhang, Haojun Jiang. Spatially adaptive feature refinement for efficient inference. *IEEE Transactions on Image Processing* (**TIP**), 2021.
3. **Yizeng Han***, Dongchen Han*, Zeyu Liu, Yulin Wang, Xuran Pan, Yifan Pu, Chao Deng, Junlan Feng, Shiji Song, Gao Huang. Dynamic Perceiver for Efficient Visual Recognition. *International Conference on Computer Vision* (**ICCV**), 2023.
4. **Yizeng Han***, Zhihang Yuan*, Yifan Pu*, Chenhao Xue, Shiji Song, Guangyu Sun, Gao Huang. Latency-aware Spatial-wise Dynamic Networks. *Conference on Neural Information Processing Systems* (**NeurIPS**), 2022.
5. **Yizeng Han***, Yifan Pu*, Zihang Lai, Chaofei Wang, Shiji Song, Junfeng Cao, Wenhui Huang, Chao Deng, Gao Huang. Learning to Weight Samples for Dynamic Early-exiting Networks. *European Conference on Computer Vision* (**ECCV**), 2022.
6. Le Yang*, **Yizeng Han***, Xi Chen, Shiji Song, Jifeng Dai, Gao Huang. Resolution adaptive networks for efficient inference. *Conference on Computer Vision and Pattern Recognition* (**CVPR**), 2020.
7. **Yizeng Han***, Zeyu Liu*, Zhihang Yuan*, Yifan Pu, Gao Huang, Shiji Song. Latency-aware Unified Dynamic Networks For Efficient Image Recognition. *In submission*, 2023.

8. Yifan Pu*, **Yizeng Han***, Yulin Wang, Junlan Feng, Chao Deng, Gao Huang. Fine-grained Recognition with Learnable Semantic Data Augmentation. *In submission*, 2023.

9. Dongchen Han, Xuran Pan, **Yizeng Han**, Shiji Song, Gao Huang. FLatten Transformer: Vision Transformer using Focused Linear Attention. *International Conference on Computer Vision* (**ICCV**), 2023.

10. Yifan Pu, Yiru Wang, Zhuofan Xia, **Yizeng Han**, Yulin Wang, Weihao Gan, Zidong Wang, Shiji Song, Gao Huang. Adaptive Rotated Convolution for Rotated Object Detection. *International Conference on Computer Vision* (**ICCV**), 2023.

11. Yulin Wang, Zhaoxi Chen, Haojun Jiang, Shiji Song, **Yizeng Han**, G Huang. Adaptive Focus for Efficient Video Recognition. *International Conference on Computer Vision* (**ICCV, Oral**), 2021.

12. Chaofei Wang, Jiayu Xiao, **Yizeng Han**, Qisen Yang, Shiji Song, Gao Huang. Towards learning spatially discriminative feature representations. *International Conference on Computer Vision* (**ICCV**), 2021.

13. Le Yang, Xiaoli Gong, Zhengwei Wu, **Yizeng Han**, Lijun He, Fan Li. Dark-channel mixed attention based neural networks for smoke detection in fog environment. *ACM International Joint Conference on Pervasive and Ubiquitous Computing* (**UbiComp**), 2021.

14. Cheng Zhang, Qiuyue Xue, Anandghan Waghmare, Ruichen Meng, Sumeet Jain, **Yizeng Han**, Xinyu Li, Kenneth Cunefare, Thomas Ploetz, Thad Starner, Omer Inan, Gregory D Abowd. FingerPing: Recognizing fine-grained hand poses using active acoustic on-body sensing. *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*, 2018.

*** Equal contribution**

Invited Talks & Presentations

- Alibaba Damo Academy, China 10/2022
- Huawei Inc., China 01/2022
- Jiqizhixin, China 03/2021

Research Projects

- Dynamic convolutional neural network and its interpretability for resource-constrained scenarios, Tsinghua University 2020 - 2022
- Da Vinci chip-friendly network architecture design, Tsinghua University 2020 - 2022
- Adaptive deep learning and visual methods, Tsinghua University 2019 - 2020

Reviewing & Service

Reviewer for

- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
- International Journal of Computer Vision (IJCV)
- IEEE Transactions on Neural Networks and Learning Systems (TNNLS)
- International Conference on Machine Learning (ICML)
- Conference on Neural Information Processing Systems (NeurIPS)
- Conference on Computer Vision and Pattern Recognition (CVPR)
- International Conference on Computer Vision (ICCV)
- European Conference on Computer Vision (ECCV)
- Pattern Recognition (PR)