

Yizeng Han

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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 <i>Advisors:</i> Shiji Song and Gao Huang	2018 - Present
	B.S., Department of Automation, Tsinghua University GPA Rank: 38/141	2014 - 2018
RESEARCH EXPERIENCE	Intern, Megvii Technology <i>Advisor:</i> Xiangyu Zhang	04/2023 - Present
	Intern, Georgia Institute of Technology <i>Advisor:</i> Gregory D Abowd	06/2017 - 8/2017
AWARDS & HONORS	- Comprehensive Merit Scholarship, Tsinghua University - National Scholarship, Ministry of Education of China - Academic Excellence Scholarship, Tsinghua University	2023, 2017 & 2016 2022 2015
PUBLICATIONS	<ol style="list-style-type: none">Yizeng Han*, Gao Huang*, Shiji Song, Le Yang, Honghui Wang, Yulin Wang. Dynamic neural networks: a survey. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)</i>, 2021.Yizeng Han, Gao Huang, Shiji Song, Le Yang, Yitian Zhang, Haojun Jiang. Spatially adaptive feature refinement for efficient inference. <i>IEEE Transactions on Image Processing (TIP)</i>, 2021.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. <i>International Conference on Computer Vision (ICCV)</i>, 2023.Yizeng Han*, Zhihang Yuan*, Yifan Pu*, Chenhao Xue, Shiji Song, Guangyu Sun, Gao Huang. Latency-aware Spatial-wise Dynamic Networks. <i>Conference on Neural Information Processing Systems (NeurIPS)</i>, 2022.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. <i>European Conference on Computer Vision (ECCV)</i>, 2022.Le Yang*, Yizeng Han*, Xi Chen, Shiji Song, Jifeng Dai, Gao Huang. Resolution adaptive networks for efficient inference. <i>Conference on Computer Vision and Pattern Recognition (CVPR)</i>, 2020.Yifan Pu*, Yizeng Han*, Yulin Wang, Junlan Feng, Chao Deng, Gao Huang. Fine-grained Recognition with Learnable Semantic Data Augmentation. <i>IEEE Transactions on Image Processing (TIP)</i>, 2023.Dongchen Han, Xuran Pan, Yizeng Han, Shiji Song, Gao Huang. FLatten Transformer: Vision Transformer using Focused Linear Attention. <i>International Conference on Computer Vision (ICCV)</i>, 2023.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. <i>International Conference on Computer Vision (ICCV)</i>, 2023.	

10. 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.
11. 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.
12. 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.
13. 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 CHI Conference on Human Factors in Computing Systems*, 2018.

SUBMISSIONS

1. **Yizeng Han***, Zeyu Liu*, Zhihang Yuan*, Yifan Pu, Gao Huang, Shiji Song. Latency-aware Unified Dynamic Networks For Efficient Image Recognition. *In submission*.
2. Dongchen Han, Tianzhu Ye, **Yizeng Han**, Zhuofan Xia, Shiji Song, Gao Huang. Agent Transformer: On the Integration of Softmax and Linear Attention. *In submission*.
3. Yong Xien Chng, Henry Zheng, **Yizeng Han**, Xuchong Qiu, Gao Huang. Segmentation-grounded Text Prediction for Referring Image Segmentation. *In submission*.
4. Le Yang, Ziwei Zheng, **Yizeng Han**, Shiji Song, Gao Huang, Fan Li. DyFADet: Dynamic Feature Aggregation for Temporal Action Detection. *In submission*.
5. Le Yang, Ziwei Zheng, **Yizeng Han**, Shiji Song, Gao Huang, Fan Li. OStr-DARTS: Differentiable Neural Architecture Search based on Operation Strength. *In submission*.
6. Yulin Wang, Yang Yue, Rui Lu, **Yizeng Han**, Shiji Song, Gao Huang. EfficientTrain: Generalized Curriculum Learning for Training Visual Backbones. *In submission*.

* Equal contribution

INVITED TALKS	- Alibaba Damo Academy, China	10/2022
&	- Huawei Inc., China	01/2022
PRESENTATIONS	- 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)
- IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)
- International Conference on Machine Learning (ICML)
- Conference on Neural Information Processing Systems (NeurIPS)
- International Conference on Learning Representations (ICLR)
- Conference on Computer Vision and Pattern Recognition (CVPR)
- International Conference on Computer Vision (ICCV)
- European Conference on Computer Vision (ECCV)
- Pattern Recognition (PR)
- International Conference on Image and Graphics (ICIG)