

Yizeng Han

CONTACT 616 Center Main Building, *Email: hanyz18@mails.tsinghua.edu.cn*
INFORMATION Tsinghua University, *Phone: (+86)18800127138*
Beijing 100084, China *Homepage: www.yizenghan.top*

RESEARCH My research focuses on deep learning and computer vision, in particular dynamic
INTERESTS 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 **Intern, Megvii Technology 04/2023 - 12/2023**
EXPERIENCE *Advisor: Xiangyu Zhang*
Intern, Georgia Institute of Technology 06/2017 - 8/2017
Advisor: Gregory D Abowd

AWARDS & - Comprehensive Excellence Scholarship, Tsinghua University 2023
HONORS - National Scholarship, Ministry of Education of China 2022
- Comprehensive Excellence Scholarship, Tsinghua University 2017
- Comprehensive Excellence Scholarship, Tsinghua University 2016
- Academic Excellence Scholarship, Tsinghua University 2015

PUBLICATIONS

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***, Zeyu Liu*, Zhihang Yuan*, Yifan Pu, Gao Huang, Shiji Song. Latency-aware Unified Dynamic Networks For Efficient Image Recognition. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2024.
3. **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.
4. **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.

5. **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.
6. **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.
7. 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.
8. Yifan Pu*, **Yizeng Han***, Yulin Wang, Junlan Feng, Chao Deng, Gao Huang. Fine-grained Recognition with Learnable Semantic Data Augmentation. *IEEE Transactions on Image Processing (TIP)*, 2023.
9. Zhuofan Xia, Dongchen Han, **Yizeng Han**, Xuran Pan, Shiji Song, Gao Huang. GSVA: Generalized Segmentation via Multimodal Large Language Models. *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024.
10. Yong Xien Chng, Henry Zheng, **Yizeng Han**, Xuchong Qiu, Gao Huang. Mask Grounding for Referring Image Segmentation. *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024.
11. 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.
12. 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.
13. 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.
14. 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.
15. 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.
16. 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
& PREPRINTS

1. Dongchen Han*, Tianzhu Ye*, **Yizeng Han**, Zhuofan Xia, Shiji Song, Gao Huang. Agent Transformer: On the Integration of Softmax and Linear Attention. *Arxiv preprint*.
2. Le Yang, Ziwei Zheng, **Yizeng Han**, Shiji Song, Gao Huang, Fan Li. DyFADet: Dynamic Feature Aggregation for Temporal Action Detection. *In submission*.
3. Le Yang, Ziwei Zheng, **Yizeng Han**, Shiji Song, Gao Huang, Fan Li. OStr-DARTS: Differentiable Neural Architecture Search based on Operation Strength. *In submission*.
4. Yulin Wang, Yang Yue, Rui Lu, **Yizeng Han**, Shiji Song, Gao Huang. EfficientTrain: Generalized Curriculum Learning for Training Visual Backbones. *In submission*.
5. Jiangshan Wang, Yifan Pu, Yiru Wang, **Yizeng Han**, Jiayi Guo, Xiu Li, Gao Huang, GRA: Detecting Oriented Objects through Group-wise Rotating and Attention. *In submission*.

* **Equal contribution**

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

RESEARCH	- Dynamic neural network and its interpretability for resource-constrained scenarios, Tsinghua University	2020 - 2022
PROJECTS	- Chip-friendly network architecture design, Tsinghua University	2020 - 2022
	- Adaptive deep learning and visual methods, Tsinghua University	2019 - 2020

REVIEWING & **Reviewer** for

SERVICE	- 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)