

LINFENG ZHANG

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WORKING EXPERIENCE

Shang hai Jiao Tong University (Assistant Professor)

04.2024 - now

School of Artificial Intelligence

Research Direction: Efficient AI, Generative AI, Data-Centric AI

Linfeng is currently an independent principal investigator of the Efficient and Precise Intelligent Computing Lab (EPIC-Lab), focusing on efficiency in model training, inference, and datasets.

Hong Kong University of Science and Technology (Visiting Assistant Professor) 08.2024 - now
Information Hub

At the invitation of Dr. Hu Xuming, I proceeded to HKUST(GZ) to serve as a visiting assistant professor to explore the interdisciplinary research of large model compression, acceleration, and trustfulness.

EDUCATION

Tsinghua University (Ph.D.)

08/2019 - 06.2024

Institute for Interdisciplinary Information Sciences, Supervised by Kaisheng Ma

Outstanding Graduates in Beijing (<1%), Outstanding Doctoral Thesis in Tsinghua University, (<1%) 2024, Qi Hang Golden Award in Tsinghua University (Top-28 in Tsinghua), 2024

MSRA Fellowship, 2022 (Top-12 in Asian Doctoral Students)

Jiangnanxiang Scholarship, 2022 (Top-20 in Tsinghua University) National Scholarship, 2020 (2%)

Tang Lixin Scholarship (First Prize, 1%), 2021, Tsinghua-Toyota Scholarship (2%), 2023,

Northeastern University (Bachelor)

08/2015 - 06/2019

School of Computer Science And Engineering

Outstanding Graduates (<2%), Outstanding Undergraduate Thesis (<2%)

The First Prize Scholarship(<3%), Outstanding Winner in Microsoft Student Club, 2018

PUBLICATION

Citation: 1900+

1. **Linfeng Zhang**, Jiebo Song, Anni Gao, Jingwei Chen, Chenglong Bao, and Kaisheng Ma. Be Your Own Teacher: Improve the Performance of Convolutional Neural Networks via Self Distillation. IEEE International Conference on Computer Vision (ICCV2019).
2. **Linfeng Zhang**, Zhanhong Tan, Jiebo Song, Jingwei Chen, Chenglong Bao, and Kaisheng Ma. SCAN: A Scalable Neural Networks Framework Towards Compact and Efficient Models. Neural Information Processing Systems (NeurIPS2019).
3. **Linfeng Zhang**, Muzhou Yu, Tong Chen, Zuoqiang Shi, Chenglong Bao, and Kaisheng Ma. Auxiliary Training: Towards Accurate and Robust Models. IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR2020).
4. **Linfeng Zhang**, Yukang Shi, Zuoqiang Shi, Kaisheng Ma, and Chenglong Bao. Task-Oriented Feature Distillation. Neural Information Processing Systems (NeurIPS2020).

5. **Linfeng Zhang**, Chenglong Bao, and Kaisheng Ma. Self-Distillation: Towards Efficient and Compact Neural Networks. IEEE Transactions of Pattern Analysis and Machine Intelligence (IEEE TPAMI).
6. **Linfeng Zhang**, and Kaisheng Ma. Improve Object Detection with Feature-based Knowledge Distillation: Towards Accurate and Efficient Detectors. The International Conference on Learning Representations (ICLR2021).
7. **Linfeng Zhang**, Xin Chen, Xiaobing Tu, Pengfei Wan, Ning Xu, Kaisheng Ma. Wavelet Knowledge Distillation: Towards Efficient Image-to-Image Translation. IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR2022).
8. **Linfeng Zhang**, Xin Chen, Junbo Zhang, Runpei Dong, Kaisheng Ma. Contrastive Deep Supervision. European Conference on Computer Vision (ECCV2022 **Oral Presentation**).
9. **Linfeng Zhang**, Runpei Dong, Huang-Shuo Tai Kaisheng Ma. Pointdistiller: structured knowledge distillation towards efficient and compact 3d detection. IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR2023).
10. **Linfeng Zhang**, Kaisheng Ma. A Good Data Augmentation Policy Is Not All You Need: A Multi-Task Learning Perspective” in IEEE Transactions on Circuits and Systems for Video Technology (IEEE TCSVT),
11. **Linfeng Zhang**, Kaisheng Ma. Structured Knowledge Distillation Towards Efficient Object Detection. IEEE Transactions of Pattern Analysis and Machine Intelligence (IEEE TPAMI).
12. **Linfeng Zhang**, Kaisheng Ma. Tiny Updater: Towards Efficient Neural Network-Driven Software Updating. IEEE International Conference on Computer Vision (ICCV2023, **Oral Presentation**).
13. Fei Li*, **Linfeng Zhang*** (**co-first author**), Zhenbo Li. Multi-Frequency Representation with Privilege Information for Video Super-Resolution. IEEE International Conference on Computer Vision (ICCV2023).
14. **Linfeng Zhang**, Runpei Dong, Xin Chen, Kaisheng Ma. ReKo: Region-aware Knowledge Distillation Towards Efficient Image-to-Image Translation. The 34th British Machine Vision Conference 2023 (BMVC2023).
15. **Linfeng Zhang**, Yukang Shi, Ke Wang, Hung-shuo Tai, Yuan He, Kaisheng Ma. Structured Knowledge Distillation Towards Multi-view 3D Detection. The 34th British Machine Vision Conference 2023 (BMVC2023 **Oral Presentation**).
16. **Linfeng Zhang**, Xiaoman Zhang, Chenglong Bao, Kaisheng Ma. Wavelet J-Net: A Frequency Perceptive on Convolutional Neural Networks. International Joint Conference on Neural Networks (IJCNN2021).
17. Yuni Lai*, **Linfeng Zhang*** (**co-first author**), Donghong Han, Rui Zhou, Guoren Wang, Fine-grained emotion classification of Chinese microblogs based on graph convolution networks. World Wide Web Journal (WWW J).
18. Muzhou Yu, **Linfeng Zhang** (**co-first Author**), Kaisheng Ma, Revisiting Data Augmentation in Model Compression: An Empirical and Comprehensive Study, International Joint Conference on Neural Networks 2023.
19. Tianchen Zhao, Xuefei Ning, Ke Hong, Zhongyuan Qiu, Lu Pu, **Linfeng Zhang**, Yali Zhao, Lipu

- Zhou, Guohao Dai, Huazhong ang, Yu Wang. Ada3D: Exploiting the Spatial Redundancy with Adaptive Inference for Efficient 3D Object Detection. IEEE International Conference on Computer Vision (ICCV2023).
20. Runpei Dong, Zhanhong Tan, Mengdi Wu, **Linfeng Zhang**, Kaisheng Ma. Finding the Task-Optimal Low-Bit Sub-Distribution in Deep Neural Networks. International Conference on Machine Learning (ICML2022 **Spotlight**).
 21. Runpei Dong, Zekun Qi, **Linfeng Zhang**, Junbo Zhang, Jianjian Sun, Zheng Ge, Li Yi, Kaisheng Ma. Autoencoders as Cross-Modal Teachers: Can Pretrained 2D Image Transformers Help 3D Representation Learning? International Conference on Learning Representation (ICLR2023)
 22. Xiaolong Ma, Sheng Lin, Shaokai Ye, Zhezhi He, **Linfeng Zhang**, Geng Yuan, Sia Huat, Tan, Zhengang Li, Deliang Fan, Xuehai Qian, Xue Lin, Kaisheng Ma, Yanzhi Wang. Non-Structured DNN Weight Pruning – Is It Beneficial in Any Platform? IEEE Transactions on Neural Networks and Learning Systems (IEEE TNNLS).
 23. Zimo Liao, Zhicheng Luo, Qianyi Huang, **Linfeng Zhang**, Fan Wu, Qian Zhang, Yi Wang. SMART: screen-based gesture recognition on commodity mobile devices. Annual International Conference on Mobile Computing and Networking (MobiCom21 **Oral Presentation**).
 24. Muzhou Yu, Sia Huat Tan, Kailu Wu, Runpei Dong, **Linfeng Zhang**, Kaisheng Ma, CORSD: Class-Oriented Relational Self Distillation. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP2023).
 25. Zimo Liao, Zimo Liao, Zhicheng Luo, Qianyi Huang, **Linfeng Zhang**, Fan Wu, Qian Zhang, Guihai Chen, Gesture Recognition Using Visible Light on Mobile Devices. IEEE Transaction on Networking.

PATENTS

1. **Linfeng Zhang**, Image Classification Processing Method of Neural Networks Based on Frequency Domain Wavelet Basis Processing, CN111382795B
2. **Linfeng Zhang**, An Enhanced Data Augmentation Method to Improve the Accuracy and Robustness of Convolutional Neural Networks, CN111368977B
3. **Linfeng Zhang**, Donghong Han, Yunni Lai, Xu Wang, Shuai Zhao, Fine-Grained Classification Method of Social Network Text Sentiment Based on Graph Convolutional Networks, CN110472003B
4. **Linfeng Zhang**, Image Object Detection Method and Detector Based on Knowledge Distillation and Its Training Method, CN112164054A
5. **Linfeng Zhang**, Task-Driven Feature Distillation Deep Neural Network Learning Training Method and System, Readable Storage Medium, CN112132268A
6. **Linfeng Zhang**, An Auxiliary Training Method to Simultaneously Improve the Accuracy and Robustness of Neural Networks, CN111275192B
7. **Linfeng Zhang**, A Self-Distillation Training Method and Scalable Dynamic Prediction Method for Convolutional Neural Networks, CN110472730A
8. **Linfeng Zhang**, Xin Chen, Xiaobing Tu, Training Method and Apparatus for Image Processing Model, Electronic Device, CN114492731A

9. Kaisheng Ma, **Linfeng Zhang**, A Method to Accelerate Diffusion Models through Multi-Student Knowledge Distillation
10. Muzhou Yu, **Linfeng Zhang**, Kaisheng Ma, Neural Network Model Compression Method and System, CN117151189A

PROFESSIONAL SERVICE

- I have been the reviewer for academic conferences including but not limited to ICCV, CVPR, ECCV, NeurIPS, ICLR, ICML, AAAI, IJCAI. Besides, I also review papers for journals including IEE TIP, IEE TMM, IEEE TPAMI, Information Fusion, IEEE Signal Processing, IEEE TCSVT and so on.
- I was the teaching assistant for *Advances in AI Chips Design*, Tsinghua University in 2020 and 2023.