Yu Pan

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WORK EXPERIENCE

Speech and Semantics Laboratory, Huawei Noah's Ark Lab, Shenzhen   Sept. 2024 - Present
- Position: Principal Engineer
- Focus: LLM Models, Training Efficiency

EDUCATION

Harbin Institute of Technology, Shenzhen   Mar. 2021 - Jun. 2024
Ph.D. in Computer Science and Technology

University of Electronic Science and Technology of China   Sept. 2017 - Jun. 2020
M.E. in Computer Science and Technology

University of Electronic Science and Technology of China   Sept. 2013 - Jun. 2017
B.E. in Automation

RESEARCH EXPERIENCE

Statistical Machine Intelligence Learning Laboratory, HITSZ, Shenzhen   Sept. 2017 - Jun. 2024
- Adviser: Prof. Zenglin Xu
- Focus: Deep Neural Networks, Tensor Decomposition
- Project: Investigating combinations of tensor decomposition technique and deep neural networks on a variety of aspects, including model compression, training strategy, etc.

Speech and Semantics Laboratory, Huawei Noah's Ark Lab, Shenzhen   Apr. 2022 - Jun. 2024
- Adviser: Dr. Lifeng Shang & Dr. Yichun Yin
- Focus: LLM Models, Training Efficiency
- Project: Researching on the mechanism for accelerating training process of LLM models.

Computer Vision Center, Tencent AI Lab, Shenzhen   Jul. 2019 - Oct. 2019
- Adviser: Prof. Baoyuan Wu & Dr. Yong Zhang
- Focus: Adversarial Example, Model Compression
- Project: Exploring an efficient model compression method to improve the robustness of deep neural networks, mainly on defending adversarial examples.

PUBLICATIONS (∗ represents equal contribution)

- Yu Pan*, Ye Yuan*, Yichun Yin, Jiaxin Shi, Zenglin Xu, Ming Zhang, Lifeng Shang, Xin Jiang, and Qun Liu. "Preparing Lessons for Progressive Training on Language Models". AAAI, 2024 (Oral, Top 10%).

- Yu Pan, Ye Yuan, Yichun Yin, Zenglin Xu, Lifeng Shang, Xin Jiang, and Qun Liu. "Reusing Pretrained Models by Multi-linear Operators for Efficient Training". NeurIPS, 2023.

- Yu Pan, Zeyong Su, Ao Liu, Jingquan Wang, Nannan Li, and Zenglin Xu. "A Unified Weight

Initialization Paradigm for Tensorial Convolutional Neural Networks". ICML, 2022.

○ Yu Pan, Jing Xu, Maolin Wang, Jinmian Ye, Fei Wang, Kun Bai, and Zenglin Xu. "Compressing Recurrent Neural Networks with Tensor Ring for Action Recognition". AAAI, 2019.

○ Yu Pan, Maolin Wang, and Zenglin Xu. "TedNet: A Pytorch Toolkit for Tensor Decomposition Networks". Neurocomputing, 2022.

○ Yu Pan*, Nannan Li*, Yaran Chen, Zixiang Ding, Dongbin Zhao, and Zenglin Xu. "Heuristic Rank Selection with Progressively Searching Tensor Ring Network". Complex & Intelligent Systems, 2021.

○ Jing Xu, Yu Pan, Xinglin Pan, Kun Bai, Steven Hoi, Zhang Yi, and Zenglin Xu. "RegNet: Self-Regulated Network for Image Classification". TNNLS, 2022.

○ Jingquan Wang, Jing Xu, Yu Pan, and Zenglin Xu. "Semantically Proportional Patchmix for Few-Shot Learning". ICASSP, 2022.

○ Xinglin Pan, Jing Xu, Yu Pan, and Zenglin Xu. "AFINets: Attentive Feature Integration Networks for Image Classification". Neural Networks, 2022.

○ Maolin Wang, Chenbin Zhang, Yu Pan, Jing Xu, and Zenglin Xu. "Tensor Ring Restricted Boltzmann Machines". IJCNN, 2019.

○ Maolin Wang, Zeyong Su, Xu Luo, Yu Pan, Shenggen Zheng, and Zenglin Xu. "Concatenated Tensor Networks for Deep Multi-Task Learning". ICONIP, 2020.

In Process

○ Yu Pan, Chaozheng Wang, Zekai Wu, Qifan Wang, Min Zhang, and Zenglin Xu. "Fully Identical Initialization". Submitting in NeurIPS, 2024.

○ Yu Pan*, Maolin Wang*, Zenglin Xu, Xiangli Yang, Guangxi Li, and Andrzej Cichocki. "Tensor Networks Meet Neural Networks: A Survey and Future Perspectives". Submitting for TPAMI, 2024.

○ Dun Zeng, Zenglin Xu, Yu Pan, Xu Luo, and Xiaoying Tang. "Sampling Procedure Matters in Federated Learning: Independent Client Sampling with Bandit Feedback". Submitting in ICLR, 2024.

○ Dun Zeng, Zenglin Xu, Yu Pan, Qifan Wang, and Xiaoying Tang. "Tackling Hybrid Heterogeneity on Federated Optimization via Gradient Diversity Maximization". Submitting in AAAI, 2024.

SERVICE

○ Reviewer of ICML 2021-2024, NeurIPS 2020-2024, ICLR 2022-2025.

RESEARCH ACTIVITIES

○ Published several Python packages and an image annotation tool.

○ Attended AAAI 2019 Conference at Hawaii in 2019.

○ Attended short-term communication in Japan in 2016.

AWARDS & SCHOLARSHIPS

- The Outstanding Graduate Thesis Award, UESTC. 2020
- The Outstanding Graduate Award, UESTC. 2020
- The Excellence in Student Award, UESTC. 2018-2019
- The Major Academic Scholarship for Graduate Students, UESTC. 2018-2019
- The Outstanding Undergraduate Thesis Award, UESTC. 2017