JIE JI

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EDUCATION

Ph.D. in Computer Engineering
Clemson University, Clemson, SC,
Advisor: Prof. Xiaolong Ma
M.S. in Applied Mathematics
Northeastern University, Boston, MA
College of Science
B.E. in Statistics
Tongji University, Shanghai, China
College of Mathematical Sciences

AREA OF INTEREST

- 1. Efficient pre-training/fine-tuning and inference, model compression.
- 2. Algorithm-hardware co-design for mobile device.
- 3. Fairness and robustness in broad AI application.

WORK EXPERIENCE

Clemson University Research Assistant, Advisor: Prof. Xiaolong Ma

Massachusetts General Hospital

Research Intern, Advisor: Dr. Sharon Dekel

AWARDS & HONORS

1. Highlight Paper, IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2023.

PUBLICATIONS LIST

Conference Publication

- 1. [24'NeurIPS] Jie Ji, Gen Li, Jingjing Fu, Fatemeh Afghah, Linke Guo, Xiaoyong Yuan, Xiaolong Ma, "A Single-Step, Sharpness-Aware Minimization is All You Need to Achieve Efficient and Accurate Sparse Training"
- 2. [24'ICML] Jie Ji, Gen Li, Lu Yin, Minghai Qin, Geng Yuan, Linke Guo, Shiwei Liu, Xiaolong Ma, "Advancing Dynamic Sparse Training by Exploring Optimization Opportunities"
- [23'CVPR] [Highlight paper: top 2.5%]Gen Li*, Jie Ji*, Minghai Qin, Wei Niu, Bin Ren, Fatemeh Afghah, Linke Guo, Xiaolong Ma, "Towards High-Quality and Efficient Video Super-Resolution via Spatial-Temporal Data Overfitting", in Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR, 2023)
- 4. [**24'ICLR**] Gen Li, Lu Yin, Jie Ji, Wei Niu, Minghai Qin, Bin Ren, Linke Guo, Shiwei Liu, Xiaolong Ma, "NeurRev: Train Better Sparse Neural Network Practically via Neuron Revitalization."
- 5. [24'ECCV] Gen Li, Zhihao Shu, Jie Ji, Minghai Qin, Fatemeh Afghah, Wei Niu, Xiaolong Ma, "Data Overfitting for On-Device Super-Resolution with Dynamic Algorithm and Compiler Co-Design"

January 2023 - current GPA: 4.00/4.00

September 2020 - December 2022 GPA: 3.93/4.00

September 2016 - July 2020

01/2023 - current

07/2021 - 12/2021

Workshop Publication

- 1. [22'NECV] Jie Ji, Gen Li, Xiaolong Ma, "Spatial-Temporal Data Overfitting for High-Quality and Efficient Video Delivery", in New England Computer Vision Workshop, 2022.
- 2. [23'SC EPSCoR] Jie Ji, Gen Li, Xiaolong Ma, "Spatial-Temporal Data Overfitting for High-Quality and Efficient Video Delivery", in South Carolina's Established Program to Stimulte Competitive Research, 2023.
- [23'ICCV-WICV] Jie Ji, Gen Li, Xiaolong Ma, "Towards High-Quality and Efficient Video Super-Resolution via Spatial-Temporal Data Overfitting", in Women in Computer Vision workshop in conjunction with ICCV, 2023.

PROFESSIONAL ACTIVITIES

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Technical Program Committee member / Reviewer:
Conference on Parsimony and Learning (CPAL 2024).
IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2024).
IEEE Transactions on Mobile Computing (2023).
Conference on Neural Information Processing Systems (NeurIPS 2024).
Computer Networks (2024).
Association for the Advancement of Artificial Intelligence (AAAI 2025).
International Conference on Computer Vision and Pattern Recognition (CVPR 2025).
IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2025).
The International Conference on Learning Representations (ICLR2025).
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