Meng Zhang

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About Me

I am currently a Ph.D. candidate under the supervision of Prof. Tianwei Zhang at S-Lab, College of Computing and Data Science of Nanyang Technological University, Singapore.

Research Interests

- Distributed Training.
- Systems for Graph Learning.
- Machine Learning for Systems.

Education

Nanyang Technological University, Singapore,   Jan 2022 – Now
Ph.D. candidate in Computer Science
Supervisor: Prof. Tianwei Zhang

National University of Singapore, Singapore,   Jan 2021 – Jan 2022
M.Sc. in Electrical Engineering

Zhejiang University, China,   Sept 2016 – Jun 2020
B.Eng. in Information Engineering

Publications

TorchGT: A Holistic System for Large-scale Graph Transformer Training

Meng Zhang*, Jie Sun*, Qinghao Hu, Peng Sun, Zeke Wang, Yonggang Wen, Tianwei Zhang

*Proceedings of the International Conference for High Performance Computing, Networking, Storage and Analysis (**SC**), 2024* [Paper]

Sylvie: 3D-adaptive and Universal System for Large-scale Graph Neural Network Training

Meng Zhang, Qinghao Hu, Cheng Wan, Haozhao Wang, Peng Sun, Yonggang Wen, Tianwei Zhang

*IEEE International Conference on Data Engineering (**ICDE**), 2024*

Lucid: A non-intrusive, scalable and interpretable scheduler for deep learning training jobs

Qinghao Hu*, **Meng Zhang***, Peng Sun, Yonggang Wen, and Tianwei Zhang

*Architectural Support for Programming Languages and Operating Systems (**ASPLOS**), 2023* [Paper]
Distinguished Paper Award

Characterization of Large Language Model Development in the Datacenter

Qinghao Hu*, Zhisheng Ye*, Zerui Wang*, Guoteng Wang, **Meng Zhang**, Qiaoling Chen, Peng Sun, Dahua Lin, Xiaolin Wang, Yingwei Luo, Yonggang Wen, Tianwei Zhang

*USENIX Symposium on Networked Systems Design and Implementation (**NSDI**), 2024* [Paper]

Hydro: Surrogate-based Hyperparameter Tuning Service in Datacenters

Qinghao Hu, Zhisheng Ye, **Meng Zhang**, Qiaoling Chen, Peng Sun, Yonggang Wen, Tianwei Zhang

*USENIX Symposium on Operating Systems Design and Implementation (**OSDI**), 2023* [Paper]

FedDSE: Distribution-aware Sub-model Extraction for Federated Learning over Resource-constrained Devices

Haozhao Wang, Yabo Jia, **Meng Zhang**, Qinghao Hu, Hao Ren, Peng Sun, Yonggang Wen, Tianwei Zhang

*The Web Conference (**WWW**), 2024* [Paper]

Preprint

Boosting Distributed Full-graph GNN Training with Asynchronous One-bit Communication
<u>Meng Zhang</u>, Qinghao Hu, Peng Sun, Yonggang Wen, Tianwei Zhang
arXiv, 2023 [Paper]

Experience

System Research Intern, NDS Group @ Shanghai AI Lab	June 2023 – Now
Research Intern, Tencent JARVIS Lab	Oct 2020 – Feb 2021
Research Intern, Singapore University of Technology and Design	Jul 2019 - Sept 2021

Professional Services

Shadow Committee Member	[EuroSys 2023]
AE Committee Member	[MLSys 2023]
Presenter & AE Committee Member	[OSDI 2023]

Awards

Distinguished Paper Award of ASPLOS, 2023.

Student Travel Grant of OSDI, 2023.