

Yuxin Tang

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SKILLS

Programming

- Python, C++, CUDA.
- Expertise with major tools for machine learning and data analytics.

EDUCATION

Ph.D. Computer Science, Rice University, 2018-2024
Advisor: Chris Jermaine
B.S. Computer Science, Shanghai Jiao Tong University, 2014-2018

RESEARCH AREAS

Distributed ML, Data Management, Data Analytics

INTERNSHIP

2024 Summer **Bosch Center for Artificial Intelligence (BCAI), Sunnyvale, CA**

- Work on an algorithmic framework for automatic prompt optimization and prompt tuning with efficient prompt compression algorithm.
- Deploy prompt optimization framework with LLM to help with Bosch's internal document queries.

2023 Summer **Visa Research, Palo Alto, CA**

- Design algorithms for subgraph pattern discovery within graphs composed of trillion-sized transactions.
- Implement biclique computation framework designed to efficiently handle bipartite graphs that are several orders of magnitude larger.

2022 Summer **ByteDance Inc, Mountain View, CA**

- Work on self-supervised learning (SSL) on graphs and increase the accuracy of multi-view graph contrastive learning model (MVGRL) on large graph datasets (ogbn-*) by 10%.
- Work on the scalability issues of graph diffusion by approximating personalized PageRank. Reduce the end-to-end training time by more than 60%.

PUBLICATION

2024 **FedLib: Library-Based Adaptation for Continuous, Federated Fine-Tuning.**
Yuxin Tang*, Ed Hu*, Chris Jermaine.
submitted to NeurIPS'24

- 2024 **TURNIP: A “Nondeterministic” GPU Runtime with CPU RAM Offload.** Zhimin Ding, Jiawen Yao, Brianna Barrow, Tania Lorigo Botran, Christopher Jermaine, Yuxin Tang, Jiehui Li, Xinyu Yao, Sleem Mahmoud Abdelghafar, Daniel Bourgeois.
submitted to NeurIPS’24
- 2024 **Monarch: Distributed Butterfly Counting for Large-scale Bipartite Graph.** Yuxin Tang, Mangesh Bendre, Mahashweta Das.
submitted to SIGMOD’25
- 2023 **Soft Prompt Recovers Compressed LLMs, Transferably.** Zhaozhuo Xu*, Zirui Liu*, Beidi Chen, Shaochen Zhong, Yuxin Tang, Jue Wang, Kaixiong Zhou, Xia Hu, Anshumali Shrivastava.
ICML’24
- 2023 **Federated Learning Over Images: Vertical Decompositions and Pre-Trained Backbones Are Difficult to Beat.** Yuxin Tang*, Ed Hu*, Anastasios Kyrillidis, Chris Jermaine.
ICCV’23
- 2023 **Auto-Differentiation of Relational Computations for Very Large Scale Machine Learning.** Yuxin Tang, Zhimin Ding, Dimitrije Jankov, Binhang Yuan, Daniel Bourgeois, Chris Jermaine.
ICML’23
- 2022 **Distributed learning of fully connected neural networks using independent subnet training.** Binhang Yuan, Cameron R. Wolfe, Chen Dun, Yuxin Tang, Anastasios Kyrillidis, Chris Jermaine.
VLDB’22
- 2021 **Tensor Relational Algebra for Machine Learning System Design.** Binhang Yuan, Dimitrije Jankov, Jia Zou, Yuxin Tang, Daniel Bourgeois, and Chris Jermaine.
VLDB’21
- 2020 **Programmable In-Network Security for Context-aware BYOD Policies.** Qiao Kang, Lei Xue, Adam Morrison, Yuxin Tang, Ang Chen, Xiapu Luo.
USENIX Security’20
- 2018 **A Programmable, Hardware-Assisted Network Protocol Fuzzer.** Yuxin Tang, Ang Chen.
OSDI’18 (Poster)
- 2017 **Exploring Simulation of Software-Defined Underwater Wireless Networks.** Li Wei, Yuxin Tang, Yuching Cao, Zhaohui Wang, Mario Gerla.
MobiCom’17 Workshop on Underwater Networks

SERVICE

Conference Reviewer:

ICLR 2021–2024, ICML 2020–2024, NeurIPS 2020–2024, AISTATS 2022–2023

Session Chair:

VLDB 2023