Yuxin Tang

Department of Computer Science
Rice University
Houston, Texas

Email: yuxin.tang@rice.edu
Phone: +1 713 560 6850

EDUCATION

Ph.D. Computer Science, Rice University, 2018-2024
Advisor: Chris Jermaine

B.S. Computer Science, Shanghai Jiao Tong University, 2014-2018

RESEARCH AREAS

Data Management, Large Language Models, Systems for ML, Distributed ML

INTERNSHIP

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%.

2021 Summer **Jane Street, New York City, NY**

- Create efficient array data structure to index historical market data for feature selection pipeline.
- Develop adaptive quantitative investment strategies to new market conditions and optimize performance & efficiency.

PUBLICATION

2023 **Compress, Then Prompt: Improving Accuracy-Efficiency Trade-off of LLM Inference with Transferable Prompt.**
Zhaozhuo Xu, Zirui Liu, Beidi Chen, Yuxin Tang, Jue Wang, Kaixiong Zhou, Xia Hu, Anshumali Shrivastava.
In submission

2024 **Monarch: Distributed Butterfly Counting for Large-scale Bipartite Graph.**
Yuxin Tang, Mangesh Bendre, Chris Jermaine, Mahashweta Das.
VLDB'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 **Chain-Of-Thought Prompting Under Streaming Batch: A Case Study.**
Yuxin Tang
Tiny Papers @ ICLR'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 **Federated Multiple Label Hashing (FedMLH): Communication Efficient Federated Learning on Extreme Classification Tasks.**
Yuxin Tang*, Zhenwei Dai*, Chen Dun*, Anastasios Kyrillidis, Anshumali Shrivastava.
ICML-FL'21

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 2021–2023, ICML 2022–2023, NeurIPS 2022–2023, AISTATS 2022–2023, EDBT 2023, VLDB 2023, KDD 2023

Session Chair:
VLDB 2023