JIANTONG JIANG

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RESEARCH INTERESTS

My research interests lie in high-performance computing and machine learning systems, with a focus on improving efficiency, enabling automation, and making machine learning more accessible for real-world applications.

EDUCATION

The University of Western Australia   Perth, Australia
Ph.D., Computer Science   *May 2021 - Dec. 2024*
Thesis: Efficient automatic probabilistic graphical model learning and inference
Supervisors: Prof. Ajmal Mian, A/Prof. Zeyi Wen, Dr. Atif Mansoor

Northeastern University   Shenyang, China
M.Sc., Computer Science   *Sep. 2017 - Jan. 2020*
Thesis: OpenCL-based Algorithms Accelerations for CPU-FPGA Heterogeneous Systems
Supervisors: Prof. Qingxu Deng

The North University of China   Taiyuan, China
B.Sc., Computer Science   *Sep. 2013 - Jul. 2017*

PROFESSIONAL EXPERIENCE

Zhejiang University   Hangzhou, China
Research Assistant, Computer Science   *Jun. 2020 - Feb. 2021*
Supervisors: Prof. Zeke Wang

PUBLICATIONS

[1] Jiantong Jiang, Zeyi Wen, Atif Mansoor, Ajmal Mian. "Faster-BNI: Fast Parallel Exact Inference on Bayesian Networks." *IEEE Transactions on Parallel and Distributed Systems* (**TPDS**), 2024.

[2] Jiantong Jiang, Zeyi Wen, Atif Mansoor, Ajmal Mian. "Fast inference for probabilistic graphical models." *USENIX Annual Technical Conference* (**USENIX ATC**), 2024.

[3] Jiantong Jiang, Zeyi Wen, Atif Mansoor, Ajmal Mian. "Efficient Hyperparameter Optimization with Adaptive Fidelity Identification." *IEEE/CVF Conference on Computer Vision and Pattern Recognition* (**CVPR**), 2024.

[4] Jian Yang, Jiantong Jiang, Zeyi Wen, Ajmal Mian. "Parallel and Distributed Bayesian Network Structure Learning." *IEEE Transactions on Parallel and Distributed Systems* (**TPDS**), 2024.

[5] Xueying Zhu, Jie Sun, Zhenhao He, Jiantong Jiang, Zeke Wang. "Staleness-reduction Mini-batch K-means." *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), 2023.

[6] Jiantong Jiang, Zeyi Wen, Atif Mansoor, Ajmal Mian. "Fast Parallel Exact Inference on Bayesian Networks." *ACM SIGPLAN Annual Symposium on Principles and Practice of Parallel Programming* (**PPoPP**), 2023.

[7] Jiantong Jiang, Zeyi Wen, Ajmal Mian. "Fast Parallel Bayesian Network Structure Learning." *IEEE International Parallel and Distributed Processing Symposium* (**IPDPS**), 2022.

[8] Jiantong Jiang, Zeyi Wen, Zeke Wang, Bingsheng He, Jian Chen. "Parallel and distributed structured SVM training." *IEEE Transactions on Parallel and Distributed Systems* (**TPDS**), 2021.

[9] Jiantong Jiang, Zeke Wang, Xue Liu, Juan Gómez-Luna, Nan Guan, Qingxu Deng, Wei Zhang, Onur Mutlu. "Boyi: A Systematic Framework for Automatically Deciding the Right Execution Model of OpenCL Applications on FPGAs. " *ACM/SIGDA International Symposium on Field-Programmable Gate Arrays* (**FPGA**), 2020.

PROFESSIONAL SERVICES

Reviewer/External Reviewer for Journals
JMLR (MLOSS Track), Artificial Intelligence Review, Transactions on Big Data, TPDS, TKDE, TKDD

Reviewer/External Reviewer for Conferences
CVPR, AAAI, SIGIR, KDD, AISTATS, SC, ICDCS, CIKM, CCGrid, SBAC-PAD, ICMLA

SKILLS

Technical Skills
C, C++, Python, OpenMP, MPI, OpenCL, LLVM

Languages
Mandarin (Native); English (Advanced)