YAZHUO ZHANG

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EDUCATION

Emory University, Atlanta, Atlanta   *August 2019 - Present*
second-year Ph.D. student in Computer Science

South China University of Technology, Guangzhou   *Sep 2016 - June 2019*
Master of Engineering(M.E.) in Software Engineering
GPA: 89/100

South China University of Technology, Guangzhou   *Sep 2012 - June 2016*
Bachelor of Engineering(B.E.) in Software Engineering
GPA: 3.69/4.00

RESEARCH INTERESTS

Distributed systems and caching

RESEARCH EXPERIENCE

Extend Footprint descriptor on multi-layered caches   *Jan 2020 - Present*

- This project aims to develop a calculus which can provide exact or approximate miss rate curves under multi-layered caches.

Cipher Cracking System on Tianhe-2   *Nov 2017 - May 2019*

- Devised a high-throughput encryption/decryption batch computing framework based on modern processor architecture features, such as multithreading, SIMD and pipeline.

- Optimized hash join algorithms based on the features of Knights Landing (KNL).

- Optimized matching process in deciphering by using segmented bloom filter, multi-pass radix partition, software manage buffer etc.

Radio Monitoring Station System   *Jun 2017 - Dec 2017*

- Implemented radio monitoring coverage simulation calculation service based on gRPC.

- Developed a hybrid scheme that utilized MPI for distributed memory parallelism and OpenMP for shared parallelism on clusters.

Protein Secondary Structure Prediction   *Oct 2016 - Sep 2017*

- Encoded large datasets crawling from PDB database.

- Predicted protein secondary structure by BP neural network and accelerated the training process by parallel strategies

PUBLICATIONS

Tang, Deyou, **Yazhuo Zhang**, Qingmiao Zeng. "Optimization of Hardware-oblivious and Hardware-conscious Hash-join Algorithms on KNL." 2019 4th International Conference on Cloud Computing and Internet of Things (CCIOT). IEEE, 2019.

DeYou Tang, Henglin Liang, **Yazhuo Zhang**, Qingmiao Zeng. "Parallelization of Back Propagation Neural Network on Knights Landing Platform." 2018 14th International Conference on Natural Computation, Fuzzy Systems and Knowledge Discovery (ICNC-FSKD). IEEE, 2018.

SELECTED HONORS & AWARDS

- Outstanding cadres of Student Association   2018,2015
- Award for Excellence of Commercial Promise of Intel Cup Parallel Application Challenge   2016

SELECTED COURSES

- Operating System, System Programming, Advanced Database, Parallel Computing, Distributed System
- Machine Learning, Algorithms

TEACHING ASSISTANT

- 2020 System programming   Emory University
- 2019 Introduction to Computer Science   Emory University
- 2018 Fundamentals of Computers   South China University of Technology
- 2017 Database   South China University of Technology
- 2017 Parallel Algorithms and Programming   South China University of Technology