Ming Li

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Education

Master in Computer Systems Organization Sep 2020 – Jun 2023

Institute of Computing Technology, Chinese Academy of Sciences, Beijing, China
Thesis: The Architecture Design and Optimization of Service Mesh Based on DPU(Data Processing Unit)
GPA: 3.6/4
Advisor: Guihai Yan

Bachelor in Software Engineering Sep 2014 – Jun 2020

School of Software Engineering, Tianjin University, Tianjin, China
GPA: 3.3/4. Compulsory military service (2015-2017)
Advisor: Youmeng Li

Experience

Stevens Institute of Technology Mar 2025 – Current

Department of Computer Science, Research Intern

Mentor: Hongyuan Liu
Brief introduction:

- Researching GPU-accelerated regular expression matching with a focus on performance and scalability
- Previously explored graph and sparse matrix computations as preparation for irregular workload research

YUSUR Technology Co., Ltd. Beijing, China June 2023 – June 2024

Cloud-native Fundamental Software Group, Software Engineer

Manager: Mingliang Huang
Brief introduction:

- Designed and developed data flow control based on the proxy, Envoy, for proprietary RPC protocol
- Optimized the end-to-end latency of data transmission
- Validating the offloading of the application proxy's data path to VPP (Vector Packet Processing)

Institute of Computing Technology, CAS. Beijing, China June 2021 – May 2023

State Key Laboratory of Processors, postgraduate

Mentor: Guihai Yan, Wenyan Lu
Brief introduction:

- Researched on building the service mesh based on DPU
- Participated in the design of hardware assistant virtualization for DPU based on SRIOV

Honors and Awards

Outstanding Scholarship of Institute of Computing Technology 2022
The Second Prize Winner in Customized Computing Challenge 2021

PATENT

A method, apparatus, and device for resource scheduling

PUBLICATIONS

Ming Li, Wenyan Lu, Hanyue Lin, Jingya Wu, Yu Zhang, Guihai Yan. FlatProxy: A DPU-centric Service Mesh Architecture for Hyperscale Cloud-native Application. arXiv. 2024

Haishuang Fan, **Ming Li**, Jingya Wu, Wenyan Lu, Xiaowei Li, Guihai Yan. BitColor: Accelerating Large-Scale Graph Coloring on FPGA with Parallel Bit-Wise Engines. Proceedings of the 52nd International Conference on Parallel Processing. 2023.

White Paper (corporation)[In Chinese]

The technical White Paper of Data Processing Unit. DPU Benchmark Methodology and Implementation.