

EDUCATION

- **New York University**
PhD in CS, Advisor: Prof. Aurojit Panda. Sept. 2024 – Now
- **New York University Shanghai**
BSc (with Dean's Award, top-1 in the department) in CS, Advisor: Prof. Guyue Liu; Minor in Maths. Sept. 2020 – Dec. 2023
- **New York University**
Visiting Sept. 2022 – Aug. 2023

PUBLICATION

- **Heimdall: Towards Risk-Aware Network Management Outsourcing** NDSS '25
Y. Wang, Q. Men, Y. Chen, J. Liu, G. Chen, Y. Zhang, G. Liu, V. Sekar
- **ConfMask: Enabling Privacy-Preserving Configuration Sharing via Anonymization** SIGCOMM '24
Y. Wang, Q. Men, Y. Xiao, Y. Chen, G. Liu
- **[Poster] FTMesh: Efficient Fault Tolerance for Interactive Applications on Service Mesh** SOSR '23 SRC
Q. Men. Advisors: G. Liu, A. Panda.

PROFESSIONAL EXPERIENCE

- **ByteDance** Feb. 2024 - Aug. 2024
R&D Engineer at Applied Machine Learning(AML), Full Time
 - Work on Machine Learning Platform and the Ark (Model-as-a-Service platform) in Volcengine(ByteDance Cloud).
 - Achieve performance improvement and fully standardization of the observability infrastructure of both platforms. Responsible for the design, and implementation of the log and metric pipelines, and alerting system in the model fine-tuning group. Build the large scale log-based cluster operation event metric system, firstly enabling non-timeseries observability in the team.
 - Achieve the design and implementation of the hyper-parameter tuning module in the model fine-tuning group. Contribute to the storage and transmission optimization of fine-tuning tasks, optimizing checkpoint saving and loading performance by more than 50%.
 - Familiar with Kubernetes ecosystem and Prometheus ecosystem. Experience with NVIDIA DCGM and Megatron Framework. Experience with parallel file systems.
- **Privoce, Inc.** June. 2021 - Sept. 2021
Fullstack Engineer Intern
 - Lead the development of a social network product prototype.

RESEARCH EXPERIENCE

- **Federated Cache-coherence in Disaggregated Shared Memory** Aug. 2024 - Now
Advisor: Aurojit Panda
 - Design and implement integration of parallelism primitives into Ray computing framework for data-intensive workloads, extending object sharing mechanism and Plasma store in disaggregated shared memory environment.
 - Design protocols for data communication over disaggregated shared memory powered by CXL and multi-threaded async-IO without global cache-coherence across the cluster.
 - Benchmark parallelism primitives built for federated cache-coherence protocols. Verify the effectiveness of object sharing via disaggregated memory pool.
- **Expressive Privacy Policy Enforcement for Database Accesses** Aug. 2024 - Now
Advisor: Aurojit Panda
 - Propose rigorous definition of the partial ordering of privacy guarantee strength.
 - Propose policy semantics and enforcement procedures definitions with higher expressiveness with regard to the studied privacy guarantee ordering.
 - Conduct extensive case studies to verify the privacy guarantee and policy expressiveness.
 - Design and implement the query plan manipulation and optimization adapter on top of Apache DataFusion.
- **FTMesh: Efficient Fault Tolerance for Microservice-based Interactive Applications** May. 2023 - Jan. 2024
Advisors: Aurojit Panda, Guyue Liu
 - Conduct motivational performance investigations of fault tolerance mechanisms in open-source soft real-time applications.

- Propose Sidecar-proxy based transparent re-connection mechanism and proactive batched synchronization for efficient replication and recovery.
- Design and implement the efficient fault tolerance on open-source Service Mesh infrastructure Istio and Envoy, mainly in network traffic filter and in-memory storage modules.
- Preliminary result accepted as poster in SOSP '23 SRC.
- **ConfMask: Privacy-Preserving Configuration Sharing via Anonymization** Dec. 2022 - Jan. 2024
Advisor: Guyue Liu
 - Improve the time complexity of network configuration anonymization algorithm leveraging protocol and data plane properties.
 - Make significant contribution the implementation of the end-to-end network configuration anonymization system.
 - Lead the evaluation of performance and effectiveness of our system. Familiar with Batfish network configuration simulation/analysis tool.
 - Work gets published at SIGCOMM 2024.
- **Heimdall: Risk-Aware Network Management Outsourcing** Sept. 2022 - Oct. 2023
Advisor: Guyue Liu
 - Design and implement a proof-of-concept reference monitor system for secure network management in accordance to administrative policies and decisions.
 - Design and implement a easily scalable by extending GNS3 network emulation testbed for pilot study of the system, in telnet tunnel, workload load-balancing, and emulated node bridging.
 - Work gets published at NDSS 2025.
- **eBPF-based Container Privilege Monitoring and Management Tool** Apr. 2022 - Aug. 2022
 - Leverage the raw tracepoint `syscall_enter` in Linux kernel to efficiently filter all syscalls, instead of hooking separately.
 - Design and implement the end-to-end system using BPF-C and Rust with Docker. Consider container lifecycle to avoid record loss. Support exporing SECCOMP configuration.
 - Conduct performance and effectiveness evaluation, observe that 30% - 60% syscalls privilege untouched during testing execution.

AWARD & SCHOLARSHIP

Dean's Award in Computer Science, Data Science and Engineering(1/100+ per year)	2024
NYU Shanghai Excellent Graduate	2024
Degree with Cum Laude	2024
NYU Shanghai Recognition Award (with \$5500 scholarship)	2023
NYU Shanghai Dean's List for Academic Year	2021, 2022, 2023
NYU Shanghai Dean's Undergraduate Research Fund (with grant of \$1000)	2021, 2022
China System Capability Contest in OS Feature Designing, Excellence Award, with grant of 1000RMB	2022
COMAP Mathematical Contest in Modeling Honorable Mention	2022
3rd ByteDance Youth Camp Backend Track Advanced Group - Team of Innovation	2022
Xiaomi Online Judge - Excellent Volunteer	2019
National Olympics in Informatics Winter Camp - 3rd Prize	2019
National Olympics in Informatics in Provinces - 1st Prize	2018
Xiaomi National Collegiate Programming Contest - Bronze Medal	2018