Weihai Shen

Email: weihshen@cs.stonybrook.edu Website: shenweihai1.github.io Phone: +1 (480)793-8982

Education Background

Stony Brook University

NY, USA

Ph.D candidate in Computer Science

Aug. $2020 \sim \text{May } 2026 \text{ (Expected)}$

Advisor: Shuai Mu

Research areas: Distributed transactional systems; consensus protocols; fast networks

AZ, USA

Arizona State University Master of Computer Science

Aug. $2018 \sim \text{May } 2020$

GPA: 3.89/4.0

Nanjing University of Posts and Telecommunications

Nanjing, China

Bachelor of Geographic Information System

July 2010 \sim June 2014

GPA: 89.3/100

Publications

Mako: Speculative Distributed Transactions with Geo-Replication (OSDI'25)

Weihai Shen, Yang Cui, Siddhartha Sen, Sebastian Angel, and Shuai Mu Tags: Distributed transactional databases, DPDK, Efficient failure recovery

Rolis: a software approach to efficiently replicating multi-core transactions (Eurosys'22)

Weihai Shen, Ansh Khanna, Sebastian Angel, Siddhartha Sen, and Shuai Mu

Tags: Fault-tolerance in multi-core in-memory databases

DepFast: Orchestrating Code of Quorum Systems (USENIX ATC'22)

Xuhao Luo, Weihai Shen, Shuai Mu, and Tianyin Xu

Tags: Generic programming framework, Concensus protocols

Internship and 4 years of full-time work experience

Google - Intern

Sunnyvale, CA

Software Engineer Intern, NetInfra Team

May $2024 \sim \text{Aug } 2024$

- ▷ Designed and implemented a 1:N networking multiplexing prototype in Libfabric to enable efficient communication between one endpoint and multiple shared QPs.
- > Performed extensive RDMA isolation benchmarks with our RDMA-connected SmartNICs.

ByteDance (Tiktok) - Intern

Mountain View, CA

Summer Research Intern, Infrastructure System Lab

May 2021 \sim Aug 2021

▶ Designed and implemented a prototype memory allocation and tracking engine for the next-generation HSAP database system, optimizing resource utilization and system performance.

ByteDance/Baidu/Ganji (acquired by 58.com)

Beijing, China

Software development & data engineer

July 2014 \sim June 2018

- ▶ Developed an intelligent ad platform by integrating multiple ad engines, managing thousands of keywords to significantly enhance user growth. (Bytedance)
- ▶ Implemented a real-time big data analysis platform using Apache Storm, Apache Flink, Apache Spark, and HBase, delivering scalable, near-realtime statistical data to users. (Bytedance)
- ▶ Designed and implemented a robust data warehouse using Apache Hive, enabling continuous monitoring and optimization of long-term user retention rates. (Bytedance)
- ▶ Built a big data tool to analyze application performance; delivered software solutions in PHP for the application and systems according to specific needs. (Baidu)
- ▶ Enhanced website search engine optimization (SEO); developed PHP software solutions to meet diverse application and system needs. (Ganji)