

WEIHAI SHEN

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INTEREST

I am interested in distributed systems and aiming to build a fault-tolerant multi-core system. I am also open to adapt AI and machine learning to fault-tolerant systems

EDUCATION BACKGROUND

Stony Brook University

Ph.D student in Computer Science
Advised by Professor [Shuai Mu](#)

NY, USA

July 2020 ~ May 2025

Arizona State University

Master of Computer Science

AZ, USA

July 2018 ~ May 2020

Selected Course: Distributed Database Systems, Machine Learning, Natural Language Processing, Fundamentals of Statistical Learning, Data Mining

GPA: 3.89/4.0

Nanjing University of Posts and Telecommunications

Bachelor of Geographic Information System

Nanjing, China

July 2010 ~ June 2014

GPA: 89.3/100, *Rank:* 1/107

RESEARCH EXPERIENCE

Fault-tolerant in-memory storage systems

Supervised by Prof. Shuai Mu

Oct. 2020 ~ Present

- Made full use of multi-threads to insert logs into in-memory database efficiently under multi-core setting
- Wrote various evaluation micro-benchmarks to inspect contention points with help of the gprof tool

Topological data transmission in Scientific Visualization

Supervised by Prof. Ross Maciejewski

VADER Lab

Sep. 2019 ~ May. 2020

- Implemented a websocket package in an open-source library for topological data analysis, supporting topological data transmission between browser and server on a large scale
- Provided an out-of-box JS library to send and receive topological data asynchronously

WORK EXPERIENCE

ByteDance Technology Co Ltd.

Big Data Engineer, Data team

Beijing, China

June 2017 ~ June 2018

- Led a team to design and accomplish a real-time big data analysis platform that can provide users real-time statistical information on a large scale
- Designed and implemented a data warehouse to monitor the long-term retention rate of users
- Rewrote distributed real-time processing code and made full use of *Flink* to replace *Storm*

Senior Software Development Engineer, User growth team

June 2016 ~ June 2017

- Built an intelligent ads platform integrating multiple ads engine APIs to control thousands of keywords for user growth marketing
- Implemented different models and strategies to boost user growth

Baidu Inc.

Software Development Engineer, Knowledge search team

Beijing, China

April 2015 ~ June 2016

- Designed and built a big-data tool to analyze the performance of daily products
- Participated in a performance optimization project, especially in the aspect of data storage optimization

58.com & Ganji Inc.

Software Development Engineer, Real estate team

Beijing, China

July 2014 ~ April 2015

- Improved the website's search engine ranking greatly by optimizing metadata, publishing relevant contents and increasing access speed
- Redesigned indices and sharding of MySQL to accelerate database access speed