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   **NY, USA**
Ph.D student in Computer Science   July 2020 ∼ May 2025
Advised by Professor Shuai Mu

Arizona State University   **AZ, USA**
Master of Computer Science   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   **Nanjing, China**
Bachelor of Geographic Information System   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
- Design replay and recovery protocol

Topological data transmission in Scientific Visualization   VADER Lab
Supervised by Prof. Ross Maciejewski   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.   Beijing, China
Big Data Engineer, Data team   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.   Beijing, China
Software Development Engineer, Knowledge search team   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.   Beijing, China
Software Development Engineer, Real estate team   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