Zikai Wang

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Education

Renmin University of China (RUC), School of Information Beijing

B.S. in Data Science and Big Data Technology *Sep 2017 - Jun 2021*

- **GPA:** 3.64/4.0 (**Rank:** 6/40)
- **Honors & Awards:**Outstanding Graduate(RUC, Jun 2021)
- **Relevant Courses:** Introduction to Computer Systems I(CSAPP, A), Introduction to Computer Systems II(OSTEP, A), Database Systems(A), Modern Processor Design(A), Design and Analysis of Algorithms(A), Distributed and Parallel Computing(A-)

Renmin University of China (RUC), School of Information Beijing

M.S. in Computer Application Technology, Advisor: Yunpeng Chai *Sep 2021 - Present*

- **GPA:** 3.78/4.0 (**Rank:** Unknown)
- **Honors & Awards:** First Class Scholarship(2021)
- **Relevant Courses:** Distributed and Parallel Database System(A), In-memory Data Management(A), Advanced Information System(A), PostgreSQL source code analysis(A), Cloud computing and big data(A)

Research Interests

- Transaction Processing (Concurrency Control)
- Databases on Disaggregated Memory (RDMA-aware Data Structures, Cache Coherence, Concurrency Control)

Professional Experience

Tencent Inc. Beijing

Research Intern *Sep 2020 - Sep 2022*

- Provided heterogeneous multiple replicas supports for TDSQL3, a commercial distributed HTAP database developed by Tencent.
- Proposed a workload-aware storage model based on the key-value storage engine of TDSQL3. We decoupled the tuple-level key-value pairs and reorganized the field-level key-value pairs based on the cost model of key-value engines and our evaluation of storage models

Research Experience

Rethink the Linearizability Constraints of Raft for Distributed Key-Value Stores ICDE'21

Yangyang Wang; Zikai Wang; Yunpeng Chai; Xin Wang *Mar - Oct 2020*

- In this paper, we rethink the linearizability constraints of Raft in-depth and find that some of them can be broken to accelerate the performance significantly without breaking the linear consistency for distributed key-value storage systems.

Extracurricular Activities

VLDB Summer School 2021 Haikou, Hainan

Jan 2022

- **Awards:** Outstanding Student
- Participated in lectures on distributed transactions, concurrency control, transactions on new hardware, etc.
- Finished the distributed database labs based on TinySQL and TinyKV.

Additional Information

- **Programming Languages:** C/C++(proficient) Go(familiar), Python(familiar) **Tools:** LaTeX, TLA+
- **Teaching Assistant:** Introduction to Computer Systems I(CSAPP), Introduction to Computer Systems II(OSTEP), Distributed and Parallel Computing