Hao Zhang (张豪)

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Education

NCEPU   2016/09 – 2020/07
Bachelor of software engineering   Baoding, Hebei

Work Experience

EloqData   Since 2022/11
Software Engineer   Beijing
- [C++] Develop MonoSQL which encapsulate DynamoDB to be used as a storage engine for MariaDB
- [C++] Develop CDC for EloqSQL to replicate incremental data
- [C++] Develop the EloqLoad. A tool used for importing data at TB scale to EloqSQL
- [Rust] Develop the command line tool eloqctl for deploying and controlling EloqSQL and EloqKV clusters
- [Golang] github.com/monographdb/tidb Develop EloqDM which is a fork from TiDB-DM, make it compatible with EloqSQL
- [Golang] github.com/monographdb/codis Develop Codis to make it compatible with EloqKV
- [Golang] github.com/monographdb/juicefs Develop JuiceFS to use EloqKV as it's metadata engine
- [Shell] Build the release workflow of EloqSQL and EloqKV based on concourse

Tap4fun   2020/07 – 2021/12
Golang Developer   Chengdu
Participated in the development of "Age of Apes" and "Invasion"

Network courses

TinyKV github.com/howz97/tinykv
Distributed scalable key/value storage which data is sharded into multiple raft groups. Cluster scaling is happen with raft configuration change and won't block data access. Transaction is implemented based on MVCC and thus have snapshot isolation level.

MIT6.824 github.com/howz97/mit6.824 (private repo)
Distributed scalable key/value storage which data is sharded into multiple raft groups. Cluster scaling is triggered by a HA master cluster and migrate shard in a blocking way.

CMU15-445 github.com/howz97/bustub
A lab-level relational DBMS.

CMU15-721 github.com/howz97/postgres/tree/2023-S721-P1
Implement a foreign data wrapper for PostgreSQL to support columnar storage.

ToyOS github.com/howz97/toyos
A toy os kernel implemented by following the guidance of "Writing an OS in Rust" blog series.

Personal Projects

Algorithm Library github.com/howz97/algorithm   Since 2019/07
A algorithm library written in golang, covering all contents of "Algorithms" by Robert Sedgewick. This library includes sorting, balanced tree, graph, string sorting/search/matching/compression, priority queue.

LSM-Tree github.com/howz97/lsm-tree
Lightweight key/value storage engine based on lsm-tree. Implemented basic compaction, WAL, MVCC based transaction, optional serializable snapshot isolation.

Bitcask github.com/howz97/bitcask
Lightweight key/value storage engine based on bitcask, written in async rust.

Time-wheel github.com/howz97/time_wheel
A timer written in rust.

Open-Source Contributions

- github.com/etcd-io/etcd/pull/13870
- github.com/MariaDB/server/pull/2813