Yue Yin

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Education

The University of Hong Kong — Hong Kong, China
Bachelor of Engineering, Computer Science — *2017/09 - 2021/06*

- **Grade**: 3.98/4.3. Standing: 1/146.
- **Awards**: China Soong Ching Ling Foundation Scholarship; 2017-2018, 2018-2019, 2019-2020 Dean's Honors List; 2018 CMA and Donors Scholarship; 2019 AEON Scholarship; 2020 HKU Class Giving Scholarship.
- **Courses**: Algorithms, Operating Systems, Software Engineering, Databases, Functional Programming.

University of Wisconsin - Madison — Madison, WI, United States
Visiting Student — *2020/01 – 2020/05*

- **Grade**: 4.0/4.0.
- **Courses**: Advanced Algorithms, Computer Networks, Compilers, Programming Languages.

Experience

ByteDance — Hangzhou, China
Software Engineer Intern, Video Architecture — *2020/12 – 2021/04*

- Develop and optimize a video metadata system with over 3M peak QPS, supporting Douyin, Hotsoon, Xigua
- Profile data distribution in Redis to mitigate jitters caused by big objects, reducing latency pct99 by 15%
- Build a cache-inconsistency detection system for a multi-level cache system, reducing detection latency to 10 sec.
- Optimize SQL queries with bulk operations, reducing the number of queries by 70%

Morgan Stanley — Hong Kong, China
Technology Summer Analyst, Core Infrastructure — *2020/06 – 2020/08*

- Design an orchestration solution to integrate different infrastructures using Cloudify, for access control system development team, which reduces deployment time by 80 and eliminates hardcoding
- Use Cloudify to build a reusable, automated configuration module for LDAP, used by multiple teams
- Migrate data publisher in access control system from RabbitMQ to Kafka, by implementing data collection, processing, publishing between upstream LDAP and downstream Kafka cluster

Projects

MIT 6.824, Distributed Systems *(GitHub link)* — *2020/01 - 2020/06*

- Implement Raft consensus algorithm, with leader election, log replication, log compaction
- Implement a fault-tolerant key-value storage system using Raft, providing strong consistency
- Implement a distributed, fault-tolerant, concurrent MapReduce

CMU 15445, Database Systems — *2020/01 - 2020/03*

- Build a database with buffer pool manager, B+ tree index, query executor and concurrency control
- Implement a B+ tree index for insertion, deletion and point access, with latch crabbing for concurrent operations
- Implement a system catalog and query executors in iterator processing model
- Implement a lock manager with deadlock detection and support different isolation levels with 2PL

MIT 6.828, Operating System Engineering *(GitHub link)* — *2019/11 - 2020/03*

- Build an OS with virtual memory, interrupt mechanisms, process scheduling, and a file system
- Implement a paging memory system with paging, supporting Copy-on-Write, lazy page allocation
- Implement interrupts, system calls, and preemptive multitasking among user processes