

# JINTAO YE

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## EDUCATION

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**Zhejiang University**, Hangzhou, China 2019 – Present

Candidate for *M.Eng.* in Computer Technology, expected March 2022

**Zhejiang University**, Hangzhou, China 2015 – 2019

*B.E.* in Software Engineering

## WORK EXPERIENCE

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**Zhejiang Bangsun Technology Co., Ltd** Aug. 2018 – Present

*Intern* Software Engineer

### 1. **Cube Base: A Distributed KV Storage for Stream Cube** (Dec. 2018 – Present)

- Implemented off-heap in-memory key-value storage, supporting secondary key-value for Stream Cube
- Implemented data sharding based on the node's hardware information
- Implemented cluster management with ZooKeeper
- Implemented automatic data migration after cluster reconfiguration
- Implemented pipelined, asynchronized and merged master-slave replication
- Implemented data dump, binlog and replication catch-up for data consistency and availability
- After integrated with Stream Cube:
  - Disable replication: throughput increased by 15.4% and 100.8% compared with Aerospike and Redis Cluster respectively
  - Enable replication: throughput increased by 3.7% and 66.1% compared with Aerospike and Redis Cluster respectively

### 2. **Graph Cube: An Aggregated Graph Query Module on Stream Cube** (Apr. 2019 – Jul. 2019)

- Defined a query language based on Cypher
- Implemented intermediate representation layer from the parsed information by ANTRL4
- Optimized query performance by enabling batch query on fan-out edges

### 3. **Peng Cheng Laboratory: A Streaming System of Security Pattern Matching** (Apr. 2019 – Jul. 2019)

- Implemented security pattern registration and management by Kafka and MySQL
- Implemented approximate deduplication for the incoming security event stream
- Implemented phishing, spear-phishing, waterhole, botnet and DDoS pattern matching by Kafka Stream and Cube Base
- Supported at least 10,000 pattern matching tasks within 2 ms delay
- Supported horizontal scaling for parallel processing

**Hangzhou Qunhe Infomation Technology Co., Ltd (Kujiale)**

Mar. 2018 – Jun. 2018

*Intern* Backend Software Engineer

Responsible for the development and maintenance of the floor plan figure generation.

- Fixed logic and calculation bugs of figure rendering
- Implemented a new version of the floor plan figure
- Refactored the project with micro-task framework and decoupled the rendering service and the upper REST services
- Optimized the cache layer to solve the Full-GC problem

## PROJECT

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### **influx-proxy**

Sept. 2020 – Oct. 2020

Go Individual Project

A proxy for InfluxDB based on Eleme. influx-proxy. <https://github.com/keys961/influx-proxy>

- Removed the dependency of Redis
- Optimized the route strategy for query requests
- Supported non-measurement-crossing queries with SELECT/SHOW/DELETE clauses.

### **MiniSQL**

May 2017 – Jun. 2017

C++ Individual Project

A simple relational DBMS implementation. <https://github.com/keys961/MiniSql>

- Implemented buffer management, applied with FIFO page replacement
- Implemented B+ tree to build the index
- Implemented record and catalog management
- Supported simple SQL execution on a single table

## SKILLS AND INTERESTS

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- Programming Languages: Java > C/C++/Go/Rust
- Platform: Linux
- Frameworks: Spring Boot, Netty, RSocket, Redis, Kafka
- Development: Web, Distributed System
- Interests: Distributed System, Stream Processing

## MISCELLANEOUS

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- Blog: <http://keys961.github.io>
- GitHub: <https://github.com/keys961>
- Languages: English - Fluent(CET-6), Mandarin - Native speaker