Xiaochen Cui

blog: https://cuixiaochen.com
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EDUCATION

Tianjin Polytechnic University
Tianjin, China
Bachelor of Software Engineering
Sep. 2013 – Jun. 2017

EXPERIENCE

Magus Technology Co., Ltd.
Chongqing, China
Software Engineer
Apr 2021 - Present

- **LightningDB**: LightningDB is a column-oriented DBMS (columnar database management system) for online analytical processing (OLAP).
- **Archive**: Archive is the underlying storage engine for LightningDB which provides a extremely high compression rate and incredibly read and write speed.

Burnish Technology
Chongqing, China
Senior Software Engineer
Mar 2018 - Sep 2020

- **High Performance Gateway**: A high performance TCP Gateway used for receive ioT packages, with built-in features such as connection management and instructions sending.
- **Command Management Component**: Manage the complete life cycle of downstream instructions, including instructions sending, retry, status recording, result reporting, etc.
- **Package Forwarder**: Forward ioT packages to other components (or other platforms), with real-time filtering feature.
- **Cloud Native**: Bringing in the cloud native ecology to the company, including kubernetes, prometheus, grafana, consul, k8s operator, opentracing, etc.
- **System Tuning**: The design and optimization of the cache layer. Program profiling for golang/python components.
- **Alluxio**: The technical research, setup and maintenance of Alluxio.

Zhicheng Technology
Chengdu, China
Senior Software Engineer
Aug 2017 - Jan 2018

- **Backend Development**: Write back-end logic using python (Django, Twisted, etc).
- **Operation**: The deployment, operation and maintenance of various services.
- **Recruitment**: Recruitment of backend developers.
- **Management**: Formulate development specifications for the development team such as the git work flow, format for requests and response, coding style, etc.

PROJECTS

- **simple-db-java**: A simple relational database written based on mit6.830, which implemented buffer pool, write ahead log, transaction, roll-back, etc. Support underlying storage with heap format and b+ tree format. https://github.com/XiaochenCui/simple-db-hw
- **simple-db-rust**: A simple relational database written in rust, still under development. https://github.com/XiaochenCui/simple-db-rust/
- **distributed key-value storage**: A fault-tolerance key-value storage based on raft consensus algorithm. https://github.com/XiaochenCui/mit6.824

COURSES AND PAPERS STUDIED

- **MIT6.828: Operation Systems**: https://pdos.csail.mit.edu/6.828/2018/
- **MIT6.830: Database Systems**: http://dsg.csail.mit.edu/6.830/
- **MIT6.824: Distributed Systems**: https://pdos.csail.mit.edu/6.824/
- **Cryptography I**: https://www.coursera.org/learn/crypto
- **UICD CS 241: System Programming**: http://cs241.cs.illinois.edu/
- **And Some Papers**: https://cuixiaochen.com/posts/system-research-syllabus/

Programming Skills

- **Languages**: Python, Go, Rust, C++, Java

- **Technologies**: Cloud Native Operation, Linux Operation, Database Development