Jianxin Qiu

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Education

Beijing University of Posts and Telecommunications, Undergraduate 09/2017 – Present

- Major: Data Science and Big Data Technology, *The Honors Class, School of Computer Science*
- GPA: 90.69/100 (Ranked 1 out of 63), Key Courses: OS (91), Compiler (95), Network (96), Database (92)
- GRE: 328 (V: 158, Q: 170, AW: 3.5)

Work Experience

Alibaba Cloud, Hangzhou, China 07/2020 – Present

(OLAP Database Team) Software Engineer Intern

- Developed Flink connector for ClickHouse, using optimizations like parallel direct shard writing, that outperforms the default JDBC connector by 100% in most common scenarios.

SmartX Inc., Beijing, China 09/2019 – 01/2020

(Distributed Storage Systems) Software Engineer Intern, C++

- Improved the long task execution module, like backup storage parallelization, QoS and task status management.
- Implemented Hadoop-like command line tools for the NFS interface of the storage service.
- Investigated and tuned the performance of MySQL running on ZBS at kernel level.

Research & Academic Experience

Network and Big Data Technology R&D Center, Tsinghua University 02/2020 – 07/2020

(RISC-V TEE) Research Intern

- Implemented committed instruction flow collection based on RocketChip running on FireSim.
- Analyzed memory allocation patterns of Tensorflow and Tensorflow Lite.

Cambridge Academic Development Seminar, U.K. 07/2018 – 08/2018

(Machine Learning) Summer Exchange Program

- Collaborated with others researching in machine learning applications and concerns.

Portfolios

xv7 https://github.com/imtsuki/xv7

Operating System implemented in Rust

- Implemented UEFI Bootloader, memory management and process management.
- Achieved memory safety in kernel with the help of Rust's safe abstractions and lifetimes.
- Made contributions to `rust-osdev`, an organization aiming at providing tools useful for OS development in Rust.

Hedgehog Lab, Core Collaborator https://github.com/lidangzzz/hedgehog-lab

Scientific Computing Environment Running in Browsers

- Supports most common matrix operations, accelerated by GPU using WebGL.
- Built-in TeX support, data visualization and symbolic computation.
- Received over 1,200 stars on GitHub.

Skills

- **Programming Languages**: not limited to any specific language, and experienced in Rust/C/C++, comfortable with Python/Scala/TypeScript (in random order).
- **System**: familiar with operating system concepts and design, have experience in optimizing performance on kernel level using tools like `strace` and `blktrace`.
- **Distributed Systems**: taken course MIT 6.824, understand consensus algorithms like Raft and ZooKeeper, have experience in distributed system development.
- **Machine Learning**: familiar with general knowledge of machine learning.
- **Developing Tools**: experienced in Linux-based programming, have experience with team tools like Jira, Git, etc.

Miscellaneous

- Interests: Distributed Systems and storage, databases and cloud applications.
- Open-source Contributions: contributed to `@rust-analyzer, @rust-osdev, @jupyter, @pingcap`, etc.
- *Meritorious Winner* (Top 8%), Mathematical Contest In Modeling 2019