Chuanyang Qiao

437-424-0430 | chuanyang.qiao.work@gmail.com | https://github.com/FrankQQQQ/

EDUCATION

University of Toronto	Toronto, Canada
Honors Bachelor of Science in **Computer Science** *- (Dean's List; GPA: 3.74)*	*Aug. 2019 – Dec 2023*

EXPERIENCE

Amazon — May 2023 – Sep 2023
Software Engineer Intern (Java) — *Vancouver, Canada*

- **Improved Core Service Architecture**. Changed team's **CI/CD pipeline** deployment workflow and **Data pipeline** processing workflow.
- Enabled our customers to process Data pipeline definition (Artifact) by themselves in their **AWS** Account, instead of using **CI/CD pipeline** in Core Service.
- Developed **5 APIs**. Enabled batch save operations of data pipeline resources. These APIs interact directly with **AWS** DynamoDB.
- Technical coding skill highly praised by the manager. Contributed **16000+ lines of Java** code to the Amazon code base, raised **39 CRs** (much higher than average). Maintained test coverage rate of $\geq$ **94%**.

B2-ST Startup Company — Sep 2022 – Present
Co-Founder, Full Stack Developer — *University of Toronto*

- **Co-founded a startup company** focused on SMS Marketing for E-Commerce, successfully raised **$3400** in funding from UofT Department of Computer Science Innovation Lab, showcasing entrepreneurship and leadership.
- Developed Full-Stack Web Application and Service using **React**, **Node.js**, **Express.js**, **MongoDB** and **Twilio**. It includes user authentication, an SMS send/receive messaging service, a machine learning analysis system, and a subscription plan system.
- Introduced **Stripe API** for user payments for service and developed a subscription plan system.

Data on Demand — May 2022 – Sep 2022
Data Engineer Intern (SQL) — *Beijing, China*

- Analized financial reports for partner companies using **SQL Server** and **BI Techniques**.
- Cleaned and Analyzed **20+** large data sets using **SQL**.
- Visualized **12+** financial reports using **MicroStrategy BI**, improving financial transparency and decision-making.

PROJECTS

Distributed Database System | *C++, CMake* — Dec 2022 – April 2023

- **Designed and implemented a distributed database system from scratch**.
- Implemented External Configuration to keep track of data storage and data retrieval.
- Applied **consistent hashing** mechanism to minimize data movement.
- Used replication invariance and error detection to enhance **fault tolerance** and detect potential failures.
- Implemented **LSM Tree** structure to manage data in disk. (Bloom filter applied)
- Implemented **B-tree** structure to manage data in memory cache.
- Utilized **master-slave replication** mechanism that guarantees eventual consistency.

Operating System (Stanford Pintos Project) | *C, Docker* — Jan 2022 - April 2022

- **Implemented a fully functional operating system.** Showed proficiency in system-level programming.
- Incorporated lazy waiting and priority scheduling for threads, optimizing system resource utilization.
- Constructed **virtual memory** and system call handler from scratch.
- Built a **file system** with subdirectories, a buffer cache, and synchronization, ensuring efficient data storage.

TECHNICAL SKILLS

Highlights: **7+ Years of experience in Java development. High proficiency in Python Programming**.
Programming Languages: Java, Python, C, C++, JavaScript, Golang, Shell Script, Assembly, SQL, HTML, CSS
Frameworks & Tools: React, Node.js, Express.js, AWS, Flask, PyTorch, Pandas, Spring Boot, JUnit, Linux, Git
Database: MongoDB, Amazon DynamoDB, MySQL, PostegreSQL, Cloud Storage
Other Skills: Teamwork, Computer Networking, TCP/IP Protocols, Communication, Problem Solving skills, Data Structure, Algorithms, Object Oriented Design, CI/CD pipeline, DevOps, Software Testing