

# Zhiyong(Johnny) Zhao

+1 365-888-2336 | zhaoz233@mcmaster.ca | [linkedin.com/in/zhiyong-zhao/](https://www.linkedin.com/in/zhiyong-zhao/) | [github.com/DateBro](https://github.com/DateBro)

## Education

**McMaster University** Sep. 2021 - Jun 2023  
Master of Engineering in Computing and Software(Co-op) Hamilton, Ontario, Canada

**Shandong University** Sep. 2017 - Jun. 2021  
Bachelor of Science in Computer Science, GPA: 3.7/4.0 Jinan, Shandong, China

## Skills

**Languages:** Java, Python, C++, JavaScript, HTML/CSS, Kotlin, Bash

**Database:** SQL, NoSQL, MySQL, SQLite, MongoDB, PostgreSQL, Redis

**Knowledge:** OOP/OOD, CI/CD, Unit Test, RESTful API, UML, JSON, XML, JWT, CDN

**Frameworks:** Spring Boot, Spring Cloud, React.js, Vue.js, Flask, Bootstrap, JMeter, Nginx, Kafka, Elasticsearch

**Tools&Platforms:** Git, NPM, Maven, Gradle, Postman, Fiddler, Docker, Github, GitLab, Linux, Heroku, AWS EC2

## Experience

**Software Development Engineer** Jul. 2021 - Jul. 2022  
*Financial Service Business Unit, Beijing Sankuai Online Technology Co., Ltd.* Beijing, China

- Implemented a marketing service with Spring Cloud and Thrift as the back-end of Meituan wechat-mini program, accumulating over **600,000** post-payment reviews and favorites for a total of **10,000** merchants.
- Built an Elasticsearch cluster, and integrated Elasticsearch into the customer management system to facilitate merchants to get the statistics of reviews and favorites, accelerating **70%** for each request.
- Constructed an Unit Test SDK based on JUnit5 and Mockito, reducing the working hour ratio of R&D to Unit Test from **1:2.5** to **1:1**, and increasing the average branch coverage of **30+** services from **40%** to **80%**.
- Assisted Software Testing Engineers to create and maintain CI/CD pipeline to replace manual way of build-deployment by Kubernetes and Jenkins, resulting in **4X** reduction of average deployment and testing time.

**Research Assistant** Sep. 2020 - May. 2021  
*Human Computer Interaction and Virtual Reality Lab, Shandong University* Jinan, China

- Developed an Online Judge system to automatically grade students' homework for the Algorithms course and produce charts of scores for professors, which saved their time spent on grading homework by an average of **80%**.
- Reduced the latency by **30%** when editing code snippets by utilizing a Redis cache layer for frequently-used contents.
- Dockerized all services and deployed the system in the cluster to secure stability and serve **396** students **24/7**.
- Wrote a detailed documentation of **40+** pages about environment installation and setup, system usage guide, back-end APIs, and system designs for a team of **8** people.

## Projects

**Full-Stack High-Concurrency Shopping Website: FlashSale** 2021

- Built a scalable online shopping platform with **Vue.js** as the front-end and **Spring Boot** as the back-end, hosted the database on **Alibaba Cloud MySQL** and deployed the application on **Alibaba Cloud ECS**.
- Achieved reverse proxy, load balancing and static resource cache by using **Nginx** and **Lua**.
- Utilized a **Guava** cache and a **Redis** cache layer for frequently-visited order detail web pages to reduce the latency.
- Remedied the risk of inconsistency between cache and database during distributed commits using asynchronous transactional messages by **RocketMQ**, thus preventing overselling.

**Back-End Currency-related Shopping Service: WechatOrder** 2020

- Ensured high security of register, login, authentication and payment by integrating **JWT** and **WeChat Pay** APIs.
- Utilized **WebSocket** to push notifications to the website users and WeChat APIs to push notifications to phone users.
- Built an order management website using **Freemarker** and **jQuery**, leveraged **Bootstrap** to style web pages.
- Constructed distributed lock with **Redis**, ensuring the data consistency between multiple hosts.
- Implemented extensive **RESTful** APIs to handle http requests and responses and tested APIs by **Postman**.