SKILLS

* Programming languages : Java, SQL
* Back-end technologies : Spring, Spring MVC, Spring Boot, MyBatis, Hibernate, Spring Security, JWT
* Front-end technologies : HTML, CSS, JavaScript
* IDEs : IntelliJ IDEA, Eclipse, Visual Studio Code
* Databases : Oracle, MySQL, Redis, MongoDB
* Tools : Git, Postman, Maven, Tomcat, DbVisualizer

EDUCATION

*Master of Computer Science Sep. 2019 – Apr. 2021*

***University of Ottawa Ottawa, ON, Canada***

*Bachelor of Engineering Honours in Computer Science* *Sep. 2013 – Jun. 2017*

***Shandong University Jinan, China***

WORK EXPERIENCE

*Software Engineer Jul. 2017 – Mar. 2019 (20 months)*

***Yonyou Network Technology Co., Ltd. Beijing, China***

* Developed **RESTful APIs** for ERP systems using **Spring**, **Spring MVC**, **MyBatis** and **Oracle**.
* Communicated with clients and transformed their requirement into system design.
* Collaborated with front-end developers to finish system integration and testing.
* Maintained ERP systems by fixing bugs and adding new features to it.

*Research Assistant Jan. 2021 – Apr. 2021 (4 months)*

***University of Ottawa Ottawa, ON***

* Administrated the back-end system of an electric vehicle project, including deploying projects, merging branches etc.
* Communicated with front-end developers and resolved the problems they faced, such as creating test cases and fixing bugs.
* Provided new students with guide to get familiar with the project.

PROJECTS

***Graduate Project***

* Designed and built **REST services** for a ridesharing system using **Spring Boot**, **Spring MVC**, **Hibernate** and **Oracle**.
* Enabled **authentication** and **authorization** by integrating **Spring Security** and **JSON Web Tokens** into the system.
* Implemented the function of sending verification code to user’s email using **Java Mail Library**.
* Built a channel to call APIs from a different server with **RestTemplate**.

[***Cyber Black Friday***](https://github.com/sing-fung/cyber-black-friday)

* Emulated the scene that thousands of people buy the same product at the same time on Cyber Black Friday, developed two methods (pessimistic locking and Redis) to prevent a mock shopping system from generating excess orders.
* Developed the project using Spring Boot, Spring MVC, **MyBatis**, **MySQL**, **Redis** and **Lua**.
* Sent a large number of **XMLHttpRequests** in a short time to create an explosion of orders.
* Proved that the Redis method is much more efficient, costing only 16 seconds to generate 20,000 orders while the other method had to spend several minutes.

[***WebSocket Real-time Tracker***](https://github.com/sing-fung/sockjs-real-time-tracker)

* Developed two methods (**WebSocket** and **SockJS**) to fetch data from **MongoDB** at regular intervals.
* Implemented the project using **STOMP**, Spring Boot and Spring MVC.
* Wrote APIs to add and modify data in MongoDB.
* Visualized the real-time information with **HTML**, **CSS** and **JavaScript**.