SHUANGQUAN(OLIVER) FU

Ithaca, NY | +1- 203-685-7737 | sf585@cornell.edu
Linkedin | GitHub

EDUCATION

Cornell University, Ithaca, NY, U.S. Aug. 2020 – Dec. 2021
- *M.Eng. in Computer Engineering*
- Main Course: Data Mining, AI, Computer Vision, Data Structure and Algorithm, Operating System, Database System

University of Bridgeport, Bridgeport, CT, U.S. Aug. 2018 – May. 2020
- *B.S. in Electrical Engineering* with **Honors, First Class** GPA: 3.98/4.0
- President's List 2019 – 2020

Wuhan University of Science and Technology, Wuhan, China Sep. 2016 – Jun. 2018
- *B.S. in Electrical Engineering* GPA: 3.7/4.0

SKILLS

- **Programming Languages:** Java, C/C++, Python, SQL, JavaScript, CSS, HTML, PHP
- **Database/Tools:** MongoDB, MySQL, Redis, Firebase, WebSocket, GraphQL, Maven, AWS, Tomcat, Linux, Docker
- **Framework:** Spring, Spring Could, Node.js, MyBatis, React.js, Vue.js, RocketMQ, Elasticsearch, Dubbo, Zookeeper

INTERNSHIPS

Moqi Inc. (Ride-share Startup), Seattle, WA Jun. 2020 – Aug. 2020
Software Engineer Intern
- Built a mobile application with founders applying **Flutter** framework in **Dart** language and **Firebase NoSQL** database; launched the app online serving **600+** active users in Cornell University with convenience of living cars.
- Designed **UI** elements and data structure to enable users to set their travel information and preferences to find matched rides.
- Developed an **optimized search algorithm** by using generated keywords; the response time was reduced by **80%**.

High-Powered Rocket Control System, University of Bridgeport, CT Sep. 2019 – Dec. 2019
Software Engineer Intern
- Worked in the High-Powered Rocket Launch team to conduct rocket launch data analysis research sponsored by **NASA**; Implemented a data analysis web application using **React.js** and **Spring** to achieve flight data visualization.
- Realized dynamic analysis and monitoring of the rocket trajectory based on **Flink** and designed a kinematics algorithm to analyze indicators of the rocket and provide intervention parameters; achieved **98%** flight correction.
- Implemented data bidirectional transmission by **WebSocket** achieving the subscription of collected data and the publication of control data through **MQTT** protocol.

SAIMO, Beijing, China Jun. 2019 – Aug. 2019
Software Engineer Intern
- Participated in the back-end development of the purchasing system, providing users with online browsing, searching, and rushing to buy products. Utilized **SpringCloud Gateway** to connect each service in series.
- Implemented the protection and authorization of services in Gateway using **OAuth.** Used **Seata** to solve the distributed transaction between services; applied **OpenResty** integrated **Nginx** to control large concurrencies in services.

PROJECTS

QRenting: A Distributed High Concurrency Housing System (GitHub) Feb. 2020 – Jul. 2020
- Built a housing management web application and a user client App based on **React.js** and **Spring Boot**; deployed all cluster services on **Docker** for rapid development and cluster service testing; Managed all services by **Dubbo** and **Zookeeper**.
- Improved the request efficiency of front end by using **GraphQL**; Deployed **Redis Cluster** to cache repeated and requested data to reduce processing pressure of back end which increased the scalability by **80%**.
- Implemented online instant chat by using **WebSocket** and utilized **MangoDB** as a database; solved the problem of instant messaging in distributed systems by **RocketMQ.** Utilized **Elasticsearch** to provide users with demand matching housing which improved response time from **seconds level to millisecond level**.

Health+: A Physical Examination Management System (GitHub) Jun. 2019 – Nov. 2019
- Developed a client App and a health management web application using **Vue.js** and **Spring** to realize specialization of member management, digitalization of health assessment etc.; improved the work efficiency of health managers.
- Utilized **Zookeeper** and **Dubbo** to achieve **SOA** system architecture, realize the high load of services, and support future service expansion and modular maintenance; used **MyBatis** for simplifying development.
- Stored all image data on **AWS S3**; improved storage usage efficiency by using **Quartz** and **Redis** to regularly clear unused image which saved 90% storage; implemented financial and operational analysis Excel report using **Apache POI** and **Chart.js.**