

Duhao Guo

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EDUCATION

Syracuse University - College of Engineering and Computer Science *Syracuse, New York* Aug 2019 - May 2021

Master of Science in Computer Engineering GPA: 3.73/4

Beijing University of Technology - Faculty of Information Technology *Beijing, China* Sep2015 - July 2019

Bachelor of Engineering in Software Engineering

SKILLS

- Programming Languages: Python, Java, PHP, C++, JavaScript
- Frameworks and Tools: Django, Flask, Spring Boot, MySQL, Linux, Git, Jenkins, CI/CD, Docker, AWS, Terraform

EXPERIENCE

Ancestry – Software Engineer Intern, Performance *Lehi, Utah* Jun 2020 - Aug 2020

- Designed and implemented an scalable, fault-tolerant Internal Notifications Service, which serves the entire company.
- Utilized **AWS SQS** to support high concurrent load and asynchronous message delivery.
- Implemented a module on **AWS Lambda** to send emails through SMTP using **Python**, achieved 99.99% delivery rate.
- Built infrastructure with **Terraform** and used **Jenkins** pipeline to deploy the project on **AWS**.

Beijing Zaoshanren Technology - Software Engineer Intern *Beijing, China* May 2019 - Jul 2019

- Built a web crawler in **Python** to collect data for collage timetable APP "AUTimetable", which serves 50k users.
- Improved the management system based on **Django** to help administrators to organize scheduled tasks.
- Developed a new feature to collect and manage advertisement data.

Beijing Weifeng Technology - Software Engineer Intern *Beijing, China* Dec 2016 - Feb 2018

- Developed **RESTful** API of an online restaurant queuing APP based on **Laravel**.
- Collaborated with frontend engineer to develop a music course registration website with **Laravel**, **HTML** and **JavaScript**.
- Operated **Linux** servers and designed a workflow based on **Jenkins** to achieve auto deployment .

PROJECTS

EKEBlock - Backend Engineer Jan 2019 - Mar 2019

- Built web backend of the management system for self-checkout app "EKEBlock" based on **Laravel**.
- Optimized **SQL** database queries of the web backend, improved performance by 50%.
- Used **JavaScript** to improve Wechat Applet "EKEBlock", enhanced user experience.
- The product serves 30k university students in 5 campuses.

Distributed Crawler System - Team Leader Jul 2017 - Nov 2018

- Collaborated with team members to design and build a distributed crawler system in **Python**.
- Utilized message queue provided by **Celery** and **RabbitMQ** to achieve parallel and asynchronous crawling.
- Developed the web interface of the crawler system based on **Flask**, **HTML** and **JavaScript**.
- Optimized the crawler system to run in a **Docker Swarm** cluster for distributed deployment.
- Awarded Second Prize(top 20%) in "China Software Cup" Software Design Competition.

High Concurrent Railway Booking System - Team Leader Jul 2018

- Collaborated to design a Railway Booking System with producer and consumer that handles high concurrent requests.
- Developed the system based on **Spring Boot**, used **ActiveMQ** to queue requests.
- Utilized pessimistic and optimistic lock to achieve locking on **Oracle DB**, then analyzed their performance.
- Deployed the system using **nginx** and **Docker** and **Jenkins** to achieve load balancing and continuous integration.