

Qinhang Li

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EDUCATION

University of Massachusetts Amherst, MA, US (gapped during 2020-2021 academic year) *Sept. 2019 – May. 2022(expected)*
Master of Computer Science, GPA: 3.71 / 4.00

Sun Yat-Sen University, Guangzhou, China *Aug. 2015 – May. 2019*
Bachelor of Software Engineering, GPA: 3.60 / 4.00

Courses: Distributed System, Data Structure, Advanced Algorithms, Database Design, Machine Learning, Computer Network

SKILLS

Programming Languages: Python, Java, JavaScript, C++

Skills and tools: MapReduce, Spark, Microservices, Docker, Kubernetes, SQL, NoSQL, PyTorch, Selenium, Wireshark

WORK EXPERIENCE

Alibaba | Software Engineer Intern | Hangzhou, China *April. 2021 – July. 2021*

- Interned in Alibaba Cloud team to develop a machine learning system for the AI-DevOps platform with a special focus on time series data prediction including QPS and RT, and used the prediction results for server auto-scaling and anomaly detection.
- Adapted approaches from [Telemanom](#) and break point detections to develop an auto-thresholding approach to reduce False-Positive alert by more than **30%**. Features are extracted with VAEs, LSTMs and [Donuts](#).
- Built the backend with **Flask** and **Springboot**. Data are processed using **Spark**. **Docker** was used to support microservice.
- Was awarded as *Excellent Innovation Project (top 2%)* internship projects.

Kuaishou | Software Engineer Intern | Beijing, China *Sept. 2020 – Jan. 2021*

- Interned in the e-Business team to develop test automation framework using Python and Java.
- Improved the existing UI style checking approach which was based on template matching with feature matching methods (SIFT) and object detection, improving efficiency in testing and maintenance by **20%**.
- **Obtained a patent** as the only author for the improvement on test automation framework.
- Developed and maintained more than 100 test automation cases using **UI Automator** and **wda** to detect and report bugs in event tracking and UI display of Kuaishou Mobile App, helping find dozens of bugs.

RESEARCH EXPERIENCE

Auto Package Counting Project *Sept. 2018 – June. 2019*

Intelligence Science and System Lab at Sun Yat-Sen University

- Collaborated with JD.com to develop a package detecting and counting project which aims to count package numbers for express transit sites.
- Adapted YOLOv3 to build this project. By modifying network structure, the algorithm achieved both recall and precision over **98%** and speed over 10FPS on CPU.
- This project has obtained a **patent**. And ranked **2/40** in the evaluation group by the committees as an outstanding thesis work.

PROJECTS

MapReduce Framework Implementation *March. 2021 – April. 2021*

- Implemented MapReduce framework using only native Java library by following MapReduce's paper, learning the best practices of multi-thread safety, locking and object oriented programming.
- Used socket for nodes to communicate, **multi-thread programming** is supported and thread safety was implemented.
- Support UDF and user defined config file such as number of workers. Support fault tolerance features, allowing tasks to run correctly when a fault occurs in worker nodes.

Homework Management Web Application *Nov. 2017 – Jan. 2018*

- Developed a web application for homework management, where student can upload their homework as well as discussing homework problems, and teachers assign and grade students' homework and give feedback. Learn how to design a system under MVC design pattern.
- Built the frontend using JavaScript and Angular. And built the back end using MongoDB and Node.js.

Honors and Activities

- Teaching Assistant of Computer Networks Course. *Sept. 2018 – May. 2019*
- Ranked **1/120** at Data Mining course. *Aug 2018*
- 2nd Runner-up of ACM Programming Contest on Guangzhou City. *Dec. 2016*
- Student Scholarship of Sun Yat-sen University. *Sept. 2016, Sept. 2017, Sept. 2018*