

Ruiyang Wang

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EDUCATION

Carnegie Mellon University

Master of Science in Software Engineering

Mountain View, CA

May 2019

Shanghai Jiao Tong University

Bachelor of Science in Computer Science

Shanghai, China

June 2017

SKILLS

Languages: C++14/17, Go, Python, C, Java, JavaScript, HTML, Rust, Objective-C, Swift, C#

Technologies: Kubernetes, Docker, Kafka, Redis, MongoDB, PostgreSQL, MapReduce, Spark, HBase

Skills: Microservices, Cloud Computing, High performance C++ applications, CI/CD workflow

EXPERIENCE

Google, Linux Core Kernel Team, Software Engineer

Refactored the Kernel development workflow

July 2019 - present

- **Git-based CLI Development:** Developed Command-line tool in Go to help developers interact with the system.
- **Continuous Integration:** Built services monitoring new commits and automatically build and test.
- **Anomaly Detection:** Collected metric data from production machines for analysis to find out anomalies and potential causes.

Clarity Movement Co., Software Team, SDE Intern

Constructed automated microservice documentation, monitoring and orchestration

May 2018 - Aug 2018

- **Document Generation:** Designed CI program to update documents from code for reliable lookup and testing.
- **Microservice Monitoring:** Traced requests and performances of microservices in **Node.JS** and **Python** on AWS Lambda and AWS Elastic Beanstalk with AWS X-Ray integration.
- **Microservice Orchestration:** Speedup integration testing **2x** by creating orchestration tool based on **Kubernetes** for **MongoDB**, **Kafka**, **Redis** and business microservices for fast, **dockerized** testing and deploying

YITU Tech, Infrastructure Team, SDE Intern

Accelerated Machine Learning Training and Inference

Sep 2017 - Dec 2017

- **Dataset Service for Machine Learning:** Accelerated PyTorch jobs **3x** by designing and implementing distributed high-performance key-value dataset service.
- **C++ Medical Imaging Data Service:** Achieved **5x** speed for medicine imaging storage service with high availability and conformance to industrial standards by reimplementing critical logic.

PROJECTS

Docker Image of MongoDB Cluster

Dockerized MongoDB cluster for integration testing

May 2018 - Aug 2018

- **Fast Initialization:** Created lightweight container initializing the whole cluster in seconds.
- **Kubernetes Integration:** Enabled easy integration into Kubernetes Cluster with minimal configurations.
- **Production-like Testing Environment:** Provided production-like database connection for accurate testing.

Twitter Analysis Web Service

Course project of 15619 Cloud Computing at CMU

Jan 2018 - May 2018

- **On-Cloud Big Data Analysis:** Extracted, Transformed and Loaded **1 TB** Tweet data by **MapReduce** on **AWS** for emotional scores, retweet relations and hashtag recommendations.
- **High-performance Query Service:** Led developing highly optimized, distributed web service with Vert.x framework in Java and load balancer for a 20000 QPS throughput while exercising fiscal control.

Open Source Contributions

Various microservice-related contributions

- **utils/coreutils:** Cross-platform Rust rewrite of the GNU coreutils.
- **aws/chalice:** Python Serverless Microframework for AWS.
- **aws/aws-xray-sdk-python:** AWS X-Ray SDK for the Python programming language.