Yijie Qiu

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EDUCATION

CARNEGIE MELLON UNIVERSITY
MS Information Systems Mgmt
December 2015 | Pittsburgh, PA

BS Chemical Engineering
May 2014 | Pittsburgh, PA
Additional major in Economics and Statistics
University Honors

COURSEWORK

GRADUATE
10605 Machine Learning Large Data Sets
11642 Search Engine
15619 Cloud Computing
95702 Distributed Systems
95877 Python for Data Analysis
95736 Advanced Relational Database

UNDERGRADUATE
15121 Data Structures in Java
36402 Advanced Data Analysis
36315 Statistical Graphics and Visualization
06462 Optimization Modeling & Algorithms

SKILL

TECHNICAL

Programming Languages
Java
Scala
Python
Ruby
Shell
R
MATLAB

Tools & Frameworks
AWS Services
Docker
Oracle Database & PL/SQL
Hive
MapReduce

LANGUAGE
Native: Mandarin Chinese
Fluent: English • Cantonese

EXPERIENCE

STRIPE | Software Engineer, Signals Crawling
November 2019 - Present | Seattle, WA

Part of Stripe's Merchant Intelligence org, Signals Crawling is responsible for collecting information about online businesses, enabling customer insights and risk evaluation.

- Improved resiliency and scalability of Stripe's website fetcher through service re-architecture. Website retrieval error rate decreased from ~20% to sub-5%. Number of requests dropped during service deployment and normal operation decreased from >1M to single-digit.

AMAZON | Software Engineer, Amazon SageMaker Hosting
March 2017 - October 2019 | Seattle, WA

Amazon SageMaker is a fully-managed machine learning platform that enables developers and data scientists to build, train, and deploy ML models at scale. The hosting service provides managed HTTPS endpoints, letting users go from ML model Docker containers to production-ready, scalable online inferences in just a few clicks.

- Contributed to initial launch of Amazon SageMaker at AWS re:Invent 2017.
- Designed and implemented APIs and workflows for bouncing the underlying infrastructure of SageMaker endpoints without interruption to inferences.
- Architected and implemented system for automated detection of SageMaker endpoints running outdated software, and applying necessary patches with zero downtime. The system has orchestrated software and security updates for more than 15K endpoints to-date.
- Developed distributed, cache-optimized routing, as well as internal container state reconciliation mechanisms for SageMaker multi-model endpoints.
- Implemented service priming mechanism for SageMaker online inference routing fleet, to minimize cold start impact on server-side latency. For requests with 1KB payload, the P99 overhead latency immediately following service deployment dropped from >1.6 second to 80 ms with priming.
- Built service canaries for all SageMaker Hosting APIs with extensible design, allowing for continuous monitoring of service health and requiring minimal code changes to add coverage for new features.

AMAZON | Software Engineer, Mobile Diagnostics
February 2016 - March 2017 | Seattle, WA

Part of Amazon device middleware services, Mobile Diagnostics enables Amazon devices to record key app performance, usage, and crash information, and securely transmit them to back-end services for troubleshooting and analytics purposes.

- Developed an end-to-end encrypted, terabyte scale data ingestion pipeline. The system transforms app and device usage metrics collected on individual hardware (>280 million entries daily as of mid-2017) into structured, aggregated BI tables capable of providing consumer insights and assisting business decision making.
- Established load testing frameworks for back-end services. Instrumented load tests and server, load balancer tuning in preparation of holiday peaks.
- Maintained server-side and client-side metrics and logging components used by Amazon apps across various platforms (Fire OS, Android, iOS).