

ALI HONG

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EDUCATION

UNIVERSITY OF CHICAGO

Computer Science, M.S.
2015 - 2017 | GPA: 3.87

Algorithms
Big Data
C/C++ for Advanced Programmers
Cloud Computing
Computer and Network Security
Databases
Discrete Math
Functional Programming
Introduction to Computer Systems
Networks

WASHINGTON UNIVERSITY IN ST. LOUIS

Psychology, B.A.
2008 - 2012 | GPA: 3.55

Graduated with College Honors

SKILLS

Languages

Ruby • Python • Java • Rust • Go

Tools and Technologies

Amazon Web Services
Apache Airflow
Apache Spark (Databricks certified)
Chef
Docker
Elasticsearch
Flask/SQLAlchemy
Git
Kafka
Linux
Postgres
Puppet
Ruby on Rails
Terraform
Zookeeper

Practices and Methodologies

Test-driven development
Pair programming
Agile

EXPERIENCE

APPLE Software/Infrastructure Engineer

Apr 2021 - May 2022

As the sole software engineer embedded in a team of DB administrators and infrastructure engineers, I played a lead role in designing internal applications and automating tasks that the team had been performing manually. Additionally, I served as a data infrastructure engineer for several verticals in the Wallets, Payments, and Commerce organization at Apple.

- Data infrastructure lead for the addition of major installment payment functionality in Apple Pay (announced at WWDC 2022); deployed Elasticsearch, Kafka, and Cassandra in several environments, and helped design failover strategy
- Automated certificate rotation process for services running on 300+ servers, a process which previously took hundreds of engineer-hours
- Developed an internal Java application to manage critical processes running in both on-premise and cloud data centers from a centralized control plane

SUMO LOGIC Senior Backend Software Engineer

Nov 2020 - Apr 2021

Developed new features in the Python application that serves Sumo Logic's Cloud SIEM product. Maintained an event ingestion pipeline comprised of Kafka topics, a highly concurrent Scala application, and an Elasticsearch cluster running in AWS. I also led the team's efforts to manage legacy code, committing several major refactors and thousands of lines of code deletions.

- Reduced unit test suite run time by 40% by replacing table truncations with database transaction rollbacks
- Created a Docker-based testing environment to validate application code used to query Elasticsearch; these checks prevented a major bug from being deployed to production within weeks of being implemented

BRAINTREE (PAYPAL) Backend Software Engineer

2016 - 2020

Worked on backend development and infrastructure for a payments platform that is responsible for processing tens of millions of dollars' worth of transactions every day.

Data Engineering and Reporting Platform

Oct 2018 - Oct 2020

- Helped build Braintree's Data Lake in AWS using EMRFS, Glue, and Apache Spark
- Developed tooling for engineers to run Spark jobs on ephemeral EMR clusters
- Worked on the launch of Braintree's reporting platform, which included data modeling, ETL processes, and a Java Spring application for report generation

Search

Jul 2016 - Oct 2018

- Helped build and maintain the infrastructure for +20B document, +100 node Elasticsearch clusters running in on-premise data centers and serving API traffic; later migrated these clusters to AWS with zero downtime
- Maintained a data ingestion pipeline comprised of many Kafka topics and a highly concurrent Clojure application; scaled these components to ingest millions of messages per day
- Owned the search and downloads functionality in a large Ruby on Rails application; identified performance bottleneck in code for search result delivery and led re-implementation effort that achieved 50% speed increase

ADDITIONAL EXPERIENCE

BRAINTREE PAYMENTS API Support Specialist

Feb 2015 - Aug 2016

API Support

- Solved integration issues for customers using Braintree's client and server SDKs
- Developed a class to teach non-coding support team members how to build a basic web application and create a checkout flow using Braintree's server-side and client-side SDKs

UNIVERSITY OF CHICAGO Graduate TA

2 academic quarters

Introduction to Computer Systems

- Held office hours for students; topics included hardware description language, implementing a CPU for an assembly language specification, and implementing a virtual machine specification to run a small, Java-like language
- Wrote auto-graders to assess specification compliance of student submissions

EPIC SYSTEMS Technical Services

Jan 2014 - Jan 2015

- Fixed bugs in patient admission software used in hospitals

EPIC SYSTEMS Implementation Services

Jul 2012 - Dec 2013

- Project manager and consultant for medical software implementations