

# 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 • SQL

Bash • Javascript • Clojure

Scala • Go • Rust • Haskell

### Tools and Technologies

Amazon Web Services

Apache Airflow

Apache Spark (Databricks certified)

Docker

Elasticsearch

Flask/SQLAlchemy

Git

Kafka

Kubernetes

Linux (Debian)

Postgres

Puppet

Ruby on Rails

Terraform

Vim

tmux

Zookeeper

### Practices and Methodologies

Test-driven development

Pair programming

Agile

## EXPERIENCE

### APPLE | Infrastructure Engineer | 2021 - 2022

Wallets, Payment, and Commerce Data Services | April 2021 - May 2022

- Advise application development teams on best practices and design patterns for data storage solutions including Cassandra, Kafka, Redis, Elasticsearch, and various SQL implementations.
- Design, implement, and deploy an application to automate datastore operations in both on-premise and cloud data centers.

### SUMO LOGIC | Senior Software Engineer | 2020 - 2021

Cloud SIEM | November 2020 - April 2021

Develop and scale the Flask/SQLAlchemy application serving the API layer of Sumo Logic's Cloud SIEM product; maintain a data ingestion pipeline consisting of several Kafka topics and a bespoke Elasticsearch-loading app written in Scala.

- Reduced unit test suite run time by 40% by using database transaction rollbacks for test isolation instead of table truncations
- Implemented a new Docker-based integration test suite to add coverage for previously-untested code used to interact with external services

### BRAINTREE PAYMENTS | Software Engineer | 2016 - 2020

Gateway Sustainability | July 2020 - October 2020

- Maintain and scale Braintree's Gateway application, a Ruby on Rails monolith responsible for handling all transaction-related APIs
- Develop new Kubernetes tooling for Dockerized application deployments

Search and Reporting Platform | August 2019 - July 2020

- Responsible for implementing a general-purpose reporting data platform to reduce the need for custom-built, merchant-specific report logic
- Managed +20B document, +100 node Elasticsearch clusters serving API traffic
- Implemented and rolled out AWS IAM-based ES cluster authentication strategy

Data Engineering | October 2018 - August 2019

- Built a Data Lake built on AWS EMRFS, AWS Glue, and Apache Spark capable of ingesting data from any stateful application at Braintree
- Developed resource orchestration tooling to enable engineers to provision EMRFS clusters and schedule Spark job executions via Apache Airflow
- Contributed refactors to improve readability and ergonomics of existing codebase, and developed utility scripts for tedious and error-prone operations

Search | July 2016 - October 2018

- Used Puppet to manage the fleet of Xen VMs hosting our Elasticsearch clusters
- Maintained a data ingestion pipeline consisting of several Kafka topics and an ES-loading app written in Clojure
- Owned search and download functionality in Ruby on Rails monolith
- Identified performance bottleneck in generation of search result files and anchored reimplementations that yielded 50% speed increase in CSV generation

## ADDITIONAL EXPERIENCE

### **BRAINTREE PAYMENTS | API Support Specialist | 2015 - 2016**

API Support | February 2015 - August 2016

- Solved integration issues and provided technical guidance for merchants using Braintree's client and server SDKs
- Proposed, developed, and taught a class for more generalist support team members detailing the fundamentals of web applications and how to complete both server- and client-side integrations with Braintree SDKs

### **UNIVERSITY OF CHICAGO | Graduate TA | 2 academic quarters**

Introduction to Computer Systems (nand2tetris curriculum)

- 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 | 2014 - 2015**

- Fixed bugs in patient admission software surfaced by hospitals

### **EPIC SYSTEMS | Implementation Services | 2012 - 2013**

- Project manager and consultant for medical software implementations