

DAVID QIAN

CONTACT

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Blog: coffee-and-code.com

TECHNICAL SKILLS

- **Languages:** C++, Go, Java, Scala, Python, Hack/PHP, SQL
- **Frameworks & Libraries:** Hadoop, Spark, Spring Boot, Dropwizard, Tornado
- **Data Science:** Jupyter, NumPy, PyTorch, Pandas
- **Platforms & Software:** AWS, Kafka, Hive, Presto
- **Tools:** Unix, Git, Mercurial, Make, Maven, Buck, Vim, IntelliJ, Docker

EXPERIENCE

Airbnb

San Francisco, United States
May - Aug 2018

Software Engineering Intern, ML Infra

- Managed configuration, scaling, and system architecture for Airbnb's deployment of Jupyterhub, a multi-user Hub for Jupyter notebooks
- Designed and implemented a service to monitor and terminate idle Jupyterhub servers, resulting in over \$100,000 USD saved per annum
- Built a JPEG Encoder to transform NumPy tensors into byte data

Facebook

Menlo Park, United States
Jan - Apr 2018

Software Engineering Intern, Data.AI (Infrastructure)

- Designed and implemented a data pipeline using Presto to evaluate the performance of FB's next-generation anomaly-based alerting infrastructure
- Approached clients based on analysis of pipeline results and spearheaded discussion on how to improve the system
- Wrote backend services in C++ to improve the Anomaly Detection system

Salesforce

San Francisco, United States
May - August 2017

Software Engineering Intern, Infrastructure

- Designed and implemented a RESTful, distributed service in Java that maintains a pool of AWS Elastic IPs for association with EC2 instances

BlackBerry

Waterloo, Canada
Sept - Dec 2016

Software Engineering Intern, Big Data Infrastructure

- Conceptualized and wrote a Spark app in Scala that filters and routes Kafka messages to a dynamic destination (i.e. HDFS, Kafka, screen, etc.)

SAP

Waterloo, Canada
Jan - April 2016

Software Engineering Intern, Emerging Technologies

- Built a plugin-based Java app that processes stream data from IoT devices

PROJECTS

Chapel

Nov - Dec 2017
chapel-lang.org

Open-source Development, Chapel

- Chapel is a modern high-performance computing (HPC) language by Cray
- Wrote binary insertion sort for Chapel's sort module

Undergraduate Research

Sept - Dec 2017
Professor Tim Brecht (UWaterloo)

Data Science, C

- Examined the relationships between different Wi-Fi signal configurations
- Applied statistical techniques to create and test various predictive models

Alexandria

June 2017 - Present

Distributed Systems, Raft, gRPC, Go

- An in-memory, distributed key-value store written in Go
- Implemented Raft for handling distributed consensus (in-progress)
- Utilized gRPC for peer to peer communication in the cluster
- Created a RESTful service for clients to interact with the data store

FortuneTeller

Jan 2017
Rank: 75th percentile (theaigames.com)

Artificial Intelligence, C++

- A bot that competitively plays Connect-4 against other bots
- Implemented minimax with alpha-beta pruning; able to look 5 moves ahead

Connect

October 2016
MHacks 8

Machine Learning, Microsoft Azure

- Designed a machine learning workflow that translates sign language sentences to text with a ~97% accuracy using Azure ML Studio

EDUCATION

University of Waterloo

Sept 2014 - June 2019 (expected)

Candidate for Bachelor of Software Engineering (BSE)