# DAVID QIAN

## CONTACT

**Phone:** 416-806-7775
**E-mail:** dqian96@gmail.com
**LinkedIn:** in/dqian96
**GitHub:** github.com/dqian96

## TECHNICAL SKILLS

- **Languages:** C++, Go, Java, Scala, Python, PHP, JavaScript, SQL
- **Frameworks and Libraries:** Hadoop, Spark, Kafka, gRPC, Spring Boot, Dropwizard
- **Platforms:** Amazon Web Services, Google Cloud Platform, Microsoft Azure
- **Tools:** Unix, Git, Perforce, Make, Maven, IntelliJ IDEA, Docker, Vagrant

## EXPERIENCE

**Salesforce**
San Francisco, United States
May – August 2017

**Software Engineer, Infrastructure**
- Designed and implemented a RESTful, distributed service in Java that maintains a pool of AWS Elastic IPs for association with EC2 instances
- Built a service in Java to snapshot and persist distributed databases hosted on EC2 instances

**BlackBerry**
Waterloo, Canada
Sept – Dec 2016

**Software Engineer, Big Data Infrastructure**
- Created a Spark app in Scala that filters and routes Kafka messages to dynamic destinations based on a self-written domain specific language
- Wrote a Spark app in Scala that anonymizes >85 TBs of Kafka data each day

**SAP**
Waterloo, Canada
Jan – April 2016

**Software Application Developer**
- Built a plugin-based Java app that processes stream data from IoT devices
- Created a web UI that streams and visualizes real-time data using WebSockets and JavaScript

**Metroland Media Group**
Toronto, Canada
May – Aug 2015

**Full Stack Web Developer**
- Implemented frontend features using jQuery and Bootstrap
- Built backend services in PHP and MySQL

## PROJECTS

**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

**FourtuneTeller**
Jan 2017
*Plays on: http://theaigames.com/*
*Current Record: 35W/2L/0T*
*Rank: 75th percentile*

**Artificial Intelligence, C++**
- A bot that competitively plays Connect-4 against other bots
- Implemented minimax with alpha-beta pruning; able to look ahead 5 moves in under 700 milliseconds on the game server
- Created an effective linear-time heuristic evaluation function based on reading of Connect-4 theory

**Connect**
October 2016
*MHacks 8*

**Machine Learning, Windows Development, Microsoft Azure, C#**
- A Windows application that translates American sign language sentences captured by a Microsoft Kinect into text
- Designed a machine learning workflow that translates sign language to text with a ~97% accuracy using Azure ML Studio

**SpeedRun**
Jan 2015
*UofT Hacks 2015, 2nd place*

**Android Development, Java**
- An Android fitness game that can connect to Pebbles and Android Wear devices

**SleepyTunes**
Dec 2014
*5000 downloads, 4-star rating*

**Android Development, Java**
- An Android app that periodically adjusts music volume so that a person can listen to music while falling asleep more easily

## EDUCATION

**University of Waterloo**
Sept 2014 – June 2019 (expected)

**Candidate for Bachelor of Software Engineering (BSE)**