CLEMENT FUNG

MSc Computer Science @ UBC | Vancouver, BC
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LinkedIn | *Github*

Summary

- Over 2 years of software engineering experience in **Linux** environments, confident in **Java**, **Go** and **Python**
- Proficient with **distributed data infrastructure** systems in data extraction, streaming and storage
- Loves data: **R, Python** (statistics, machine learning, visualization), **DBs** (SQL, NoSQL, Distributed), **Processing** (Apache Samza, Apache Kafka, Hadoop)
- Comfortable in complex use cases with version provisioning software (**Git**, **SVN**)
- Eager to learn and explore with an expanding knowledge in the fields of **Distributed Systems**, **Machine Learning** and **Big Data**

Education

Masters of Computer Science
University of British Columbia
Vancouver, BC
09/2016 - present

- Master's thesis on privacy and security problems in large scale machine learning systems
- Computer Science Graduate Student Association President since Spring 2017
- Teaching assistant for CPSC 340: Machine Learning – Fall 2017
- 2x Teaching assistant for CPSC 210: Software Construction

Systems Design Engineering
University of Waterloo
Waterloo, ON
09/2011 – 06/2016

- Sandford Fleming Award for Co-operative Proficiency (**Outstanding Work Term and Academic achievement**)
- Sandford Fleming Award, Fall 2013 (Outstanding Written Communication – WKRPT 200)
- 4x Dean's Honour List
- Colonel Hugh Heasley Engineering Scholarship – Fall 2011

Exchange Student
Lund University
Lund, Sweden
01/2015 – 06/2015

- Lived 5 months abroad in a foreign continent
- Completed courses and achieved elementary proficiency in **Swedish**, a completely foreign and new language

Coursera Online
01/2014 – present

- **Machine Learning** – Stanford University
- **Game Theory II: Advanced Applications** – Stanford University
- **Mining Massive Datasets –** Stanford University

Experience

Software Engineering Intern
LinkedIn Corporation
Sunnyvale, CA, USA
06/2015 – 08/2015

- Designed and developed a prototype of **statistics server** for highly available real-time user statistics, using **Apache Samza** to create a **distributed streaming** architecture
- Collaborated with various internal clients to gather design requirements for online learning applications
- Implemented performance metrics for system dashboards and real time reporting

Software Engineering Intern
LinkedIn Corporation
Mountain View, CA, USA
08/2014 – 12/2014

- Worked on **Project Voldemort**, an open-source, **distributed NoSQL** database
- Prototyped the development of the derived data serving system, **Venice**
- Wrote a **propagation layer** plug-in for Voldemort, leverages Apache Kafka to process concurrent writes from clients on the server side
- Gained experience with top level Apache projects: **Hadoop**, **Kafka** and **Zookeeper**

Software Developer
Voicebox Technologies
Bellevue, WA, USA
01/2014 – 04/2014

- In Java, implemented **concurrent programming** techniques and **thread-safety** to rewrite database access on mobile service, resulting in a **3x performance** improvement
- Profiled and evaluated database design options for server refactoring
- Created a testing tool in Java to simulate server requests and create QA reports

Software Developer
OICR (Ontario Institute for Cancer Research)
Toronto, ON
05/2013 – 08/2013

- Wrote an integrated R package and pipeline tool for recurrent genomic aberration data; performs **statistical analysis** and **data visualization**; using Perl, R, on SGE cluster
- In R, created a package for comparing statistical inference tools on copy number data
- **Introduced unit testing** procedures for R development to the lab

Projects

DistML
University of British Columbia
04/2016 - present

- A distributed system for supporting collaborative, multi-tenant machine learning
- Focuses on **privacy-preserving machine learning,** differential privacy and security
- Uses **onion routing** through Tor to provide client-server anonymity

DistClocks
University of British Columbia
06/2016 - present

- One of the lead developers for a **vector clock** management library
- Instruments distributed systems for easy management of event ordering
- Uses **Msgpack**, a serialization library, for support in Java, C++, C and Go

Driven
University of Waterloo
09/2015 – 04/2016

- Fourth year engineering design project, **Voter's Choice Award 2016**
- Built a system to annotate, critique and give feedback on driving habits
- In **real-time**, processes signals from video and vehicle sensors, using **OpenCV**
- Uses **semi-supervised classification** methods to derive sentiment from driver logs

Extra-Curricular

Competitive Hacker
Various Hackathons
09/2013 – 08/2015

- For 2 years, regular participant of collegiate and professional hackathons
- Won $10 000 for **1st place** at LinkedIn's 2015 Bay Area Intern Hackathon, team of 5
- "Best Use of PayPal" at CalHacks 2014, team of 5
- "Best Use of MongoDB" at MHacks 2013, team of 4

Big Events Team Lead
Engineers Without Borders
University of Waterloo
01/2013 – 08/2014

- Organized Run To End Poverty Waterloo, raising **$4000+** to fund African fellow programs
- Conducted a campus-wide soccer tournament for charity
- Conducted team meetings and coached a team of 8 throughout the school term
- Attended long term planning meetings to scope out club's long term future

Interests

- Played on an amateur **ultimate** team in 2013 season as part of the Toronto Ultimate Club League, and again in 2016 season with Vancouver Ultimate League
- Aspiring film snob, soccer fanatic, avid traveler and board game design enthusiast
- Competitive MLS fantasy soccer manager, placed in the **99th percentile** worldwide consecutively for 3 seasons