# Simon Fan

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#### **EDUCATION**

fall 2014 winter 2019

University of Waterloo

Bachelors of Computer Science, co-operative program

course topics I enjoyed a lot:

feature learning, distributed systems, graph algorithms, classification, logic, financial modeling



### **EXPERIENCE**



summer 2017 - present New York City, NY

- · developed a time series discovery feature allowing ranked similarity search over metrics
- · researched, prototyped and implemented various root cause analysis tools
- · analyzed and extracted features from time series data for causal structure learning



# Software Engineering Intern - Web Platform

rails, python, mysql, graphql, analytics.js

fall 2016 Ottawa, ON

- · unified web app rendering flow by abstracting 100+ rails classes, reducing the number of components by 10x and improving code readibility
- instrumented the home feed, enabling funnel analysis on merchant navigation patterns
- · demoed a proof of concept shopping bot classifier, starting a full time project



### Programmer Analyst Intern - Shareholder Systems java, sybase, d3.js, flot.js, jquery

winter 2016 Toronto, ON

- · developed an application to visualize KPIs for the fund marketing team
- · architected the database model and implemented its corresponding ETL pipeline
- · designed and implemented a user friendly query interface supporting all T-SQL joins
- · extended 15+ flot.js features to incorporate d3.js features for more powerful interactivity



# METRICWIP Software Engineering Intern

mongodb, express, angular.js, node.js

summer 2015 Waterloo, ON

- · scaled web application's local storage usage to use 10x less space and 5x less overhead
- · won the internal demo day by owning the development of the rewards program
- · designed and built a new researcher portal interface, while refactoring frontend code



#### **INITIATIVES**



#### Tech Retreat

winter 2014 - summer 2016

Founding Organizer

- · organized Canada's first annual highschool learnathon and hackathon
- ·coordinated logistics and sponsorships for 200 students



#### Ace Consulting Group

fall 2014 - summer 2015

- prepared and presented research deliverables to portfolio clients
- · organized various networking events connecting startups to ventures



#### **Enactus Waterloo**

fall 2014 - summer 2015

Founding VP Finance

- ·created marketing content in partnership with Iko Eco from Tanzania
- ·coordinated various fundraising and team bonding activities
- ·built the foundation for the club's accounting, sponsorship teams



### **HIGHLIGHTS**

python	jquery	scipy
ruby	rails	sklearn
C++	SQL	pandas
java	AWS	matplotlib



# **PROJECTS**

#### gestur

flask, video processing, classification interaction platform; classify sign language gestures in order to provide automated assistance to people with verbal disabilities SpartaHack: Best Use of IBM Bluemix, Best Use of Open Source, 3rd place overall

## OpenSpace: Cassini module

OpenSpace, NASA SPICE, lua space visualization platform; recreated the Cassini mission by parsing NASA SPICE data and integrating it into OpenSpace

The simulation was projected onto the Hayden Planetarium's dome

#### watchr

node.js, android, socket.io

crisis management platform; log suspicious sound levels using civilians' phones, in order to trace sound origin and send location personalized evacuation routes

HackPrinceton: Most Impactful app

# **Exploring Food Embeddings using** SS-Voc Learning

keras, word2vec models

publication; applications of semi-supervised vocabulary-informed (SS-Voc) image classification models to a subset of word2vec and corresponding images, outperforming non-Voc methods by ~10%

#### **TechTanks**

rails, redis, paper.js

educational game; built an online arena which allows players to code tank AI and battle other player submissions

more on 🚺

