

# simon fan

developer, and creative

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## EDUCATION

fall 2014 -  
winter 2019

University of Waterloo

Bachelors of Computer Science, co-operative program

relevant course topics:

data structures and algorithms, object-oriented programming,  
classifiers and pattern recognition, optimization, computer vision



## EXPERIENCE



**shopify**

software engineering intern - web platform

fall 2016 - present

rails, python, mysql, graphql, analytics.js, google analytics

- abstracted 100+ rails classes in order to unify their rendering flow, improving code reuse and reducing the number of HTML components required by 91%
- instrumented the Home feed, enabling funnel analysis on merchants' navigation patterns
- demoed a proof of concept shopping bot classifier using tensorflow at the internal hackathon, sprouting the beginnings of what is now a full time project
- proactively took additional responsibility and answered questions on the Slack channel



programmer analyst intern - shareholder systems

winter 2016

java, sybase, d3.js, flot.js, jquery, google analytics

- main developer on a new KPI report generator for the fund marketing team
- designed and implemented a query builder, querying across 3 databases simultaneously, streamlining coordination between the two teams and reducing overhead by more than 50%
- implemented the application's data pipeline, from batch processing scripts to architecting the database, reducing query times by 80%
- extended 15 flot.js features to incorporate d3.js features for more powerful interactivity



software engineering intern - web platform

summer 2015

node.js, mongodb, express, angular.js, giftbit api

- contributed to the HIPAA compliant platform for researchers and their users
- refactored web portal's local storage bindings, 10x less data stored, 15% faster on average
- conceived and owned the front-end and back-end development of the rewards program
- designed and built a user friendly researcher portal landscape interface
- implemented and fixed various features, along with the accompanying migrate scripts



## INITIATIVES



Tech Retreat

winter 2014 - present

founding organizer

- organized Canada's first annual highschool learnathon and hackathon
- coordinated logistics and sponsorships for 300 attendees



Ace Consulting Group

fall 2014 - summer 2015

associate

- prepared research deliverables for clients HearthStats and Vitameter
- organized various networking events connecting startups to ventures



Enactus Waterloo

fall 2014 - summer 2015

founding vp finance

- built the foundation for the club's accounting, sponsorship teams
- coordinated various fundraising and team bonding activities
- ranked top 16 in Canada within first few months of inauguration



## SKILLS

python	rails	d3.js
java	flask	three.js
ruby	node.js	matplotlib
javascript		
c++	mysql	numpy
bash	mongodb	scipy
matlab	sybase	tensorflow
atom	git	photoshop
vim		illustrator



## PROJECTS

gestur

flask, video processing, classification  
interaction platform; cluster sign language  
gestures in order to provide free  
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 kernels, lua  
space visualizer; recreated the Cassini  
mission by parsing NASA SPICE data and  
integrating it into OpenSpace  
*Hayden Planetarium: the simulation was  
projected onto the 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 personalized  
evacuation routes  
*HackPrinceton: Most Impactful app*

TechTanks

rails, redis, paper.js  
educational game; built an online arena  
which allows players to code tank AI and  
battle other player submissions

geovibes

three.js, flask, natural language processing  
news visualizer; 3D globe visualization of  
batch processed journalist sentiments,  
providing an overview of recent  
international events

more on 