

Simon Fan

 github.com/xmfan

 xmfan@edu.uwaterloo.ca

 linkedin.com/in/xmfan

 xmfan.github.io

 devpost.com/xmfan

 +1 347 208 6556



EDUCATION

Fall 2014 -
Winter 2019

University of Waterloo
Bachelors of Computer Science, co-operative program
Course topics I enjoyed a lot:
feature learning, classification, graph algorithms,
distributed systems, logic, financial modeling



EXPERIENCE



DATADOG Data Science Intern Summer 2017
time series analysis, ipython, matplotlib, AWS New York City, NY

- analyzed and extracted features from time series data for causal structure learning
- developed, over 3 months, a time series discovery tool allowing ranked similarity search, currently used internally to reduce manual incident discovery times by 50%
- fully replicated, using the tool, results of 10+ application performance postmortems



shopify Software Engineering Intern - Web Platform Fall 2016
rails, python, mysql, graphql, analytics.js Ottawa, ON

- unified merchant home feed rendering flow by abstracting 100+ rails classes, reducing the number of components by 90% and improving code readability
- instrumented the merchant home feed, enabling funnel analysis on navigation patterns
- demoed a prototype shopping bot classifier, which led to a new full time project



Investments Programmer Analyst Intern - Shareholder Systems Winter 2016
java, sybase, d3.js, flot.js, jquery 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



MetricWire Software Engineering Intern Summer 2015
mongodb, express, angular.js, node.js Waterloo, ON

- reduced web application's local storage space usage by 95%, and overhead by 80%
- won the internal demo day by owning the development of the rewards program
- redesigned and built a new researcher portal interface, while refactoring frontend code



INITIATIVES



SAE AutoDrive Challenge - WATonomous Fall 2017 - present
Perception Team Member

- researching and prototyping deep models for traffic sign classification
- studying implementations of deep models on Intel FPGAs



Ace Consulting Group Fall 2014 - Summer 2015
Associate

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



Tech Retreat Winter 2014 - Summer 2016
Founding Organizer

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



HIGHLIGHTS

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



PROJECTS

gestur (Sign Language Classification)
flask, video processing
interaction platform; classify sign language gestures in order to provide automated assistance to people with 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 (Crisis Management)
node.js, android, socket.io
crowdsourced safety 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' precision by ~10%

TechTanks (AI Game)
rails, redis, paper.js
educational game; built an online arena which allows players to code tank AI and battle samples or other submissions

more on 