Emmanuel Sales

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EDUCATION

University of British Columbia

M.Sc., Computer Science
Vancouver, BC | 2020-2022 (projected)
Advisor: Dr. Nicholas Harvey

B.Sc., Double Major: Honours Computer Science Major Statistics
Vancouver, BC | 2015-2020
4.33/4.33 GPA

- Undergraduate Hons. Thesis: "Restricted-dimension subgradient descent: asymptotic bounds on error", supervised by Dr. Nicholas Harvey

TECHNICAL SKILLS

- Algorithms
- Machine Learning
- Statistics
- Backend development
- Web development
- Programming languages: Python, C++, Go, Java, Scala, JavaScript, Julia

EXPERIENCE

Google Inc.

Summer 2019
Software Engineering Intern — Mountain View, CA

- Worked on Google Earth Engine, "A planetary-scale platform for Earth science data and analysis".
- Designed and developed a proxy web application that allows users to query Earth Engine assets using theopen Web Map Tile Standard (WMTS); project was open-sourced as a demo of the Earth Engine API.

Worked with: Python, Flask, Google App Engine, Java

Cockroach Labs

Summer 2018
Backend Engineering Intern — New York, NY

- Part of the SQL Front-end, Language, and Semantics team.
- Made a performance optimization to CockroachDB that sped up interleaved table delete operations by a factor of 1 billion.
- Developed a workload simulator for testing the performance of a geo-distributed CockroachDB cluster.
- Solved SQL semantics issues in CockroachDB for compatibility with PostgreSQL semantics.

Worked with: Go, Git

Splunk

Summer 2017
Software Developer Intern — Vancouver, BC

- Backend development for the Machine Learning Incubation team; performance and functionality automated tests and front-end components for the Metrics team.

Worked with: Scala, Python, React.js, PostgreSQL, Docker, Git

Hootsuite Media Inc.

Summer 2015, Summer 2016
Software Developer Intern — Vancouver, BC

- Full-stack development in Scala and React.js; internal tools development for build and deploy monitoring.

Worked with: Scala, React.js, Python, Ruby, Mesos, Docker, Git

SELECTED PROJECTS

This Pokémon Does Not Exist

https://github.com/emsal1863/pkmn_doesnotexist

A machine learning project that generates Pokémon sprites using a variational autoencoder neural network. Entered into the hackathon nwHacks 2020.

Twitter Clustering Project

https://emsal.me/blog/4

A machine learning analysis in Python and Julia using the ISOMAP algorithm on the social network graph of all of the Twitter accounts I follow to cluster them into distinct groups.

Resolvplox

https://github.com/emsal1863/resolvplox_alt

DNS proxy written in Go that allows users to configure their DNS resolution paths on a domain-by-domain basis.

Socksify

https://github.com/emsal1863/Socksify

Software written in C that allows users to run processes with all outgoing TCP traffic going througha SOCKS5 proxy.