Emmanuel Sales

https://emsal.me | emsal1863@gmail.com

EDUCATION

University of British Columbia   Vancouver, BC
M.Sc., Computer Science   2020-2022 (projected)
- Advisor: Dr. Nicholas Harvey

B.Sc., Double Major: Honours Computer Science, Major Statistics   2015-2020
- 4.33/4.33 GPA (Distinction)
- Undergraduate Hons. Thesis: "Restricted-dimension subgradient descent: asymptotic bounds on error", supervised by Dr. Nicholas Harvey

EXPERIENCE

Google Vancouver, BC (Remote) | Software Developer Intern   Summer 2020-present
- Implementing clustering algorithms for geospatial data for the Google BigQuery database environment.
Worked with: C++, Google BigQuery

Google Mountain View, CA | Software Engineering Intern   Summer 2019
- Worked on Google Earth Engine, a data platform provided by Google for geospatial analysis at scale.
- Designed and developed a cloud application allowing users to query Earth Engine assets using the open Web Map Tile Standard.
Worked with: Python, Flask, Google App Engine, Java

Cockroach Labs New York, NY | Backend Engineering Intern   Summer 2018
- Improved the performance of a class of delete operations by a factor of 1 billion.
- Developed a workload simulator for testing the performance of a geo-distributed CockroachDB cluster.
- Introduced programming language features in CockroachDB for compatibility with PostgreSQL semantics.
Worked with: Go, Git

Splunk Vancouver, BC | Software Developer Intern   Summer 2017
Worked with: Scala, Python, React.js, PostgreSQL, Docker, Git

Hootsuite Vancouver, BC | Software Developer Intern   Summer 2015, Summer 2016
Software Developer Intern, Platform Team   Vancouver, BC
Worked with: Scala, React.js, Python, Ruby, Mesos, Docker, Git

SELECTED PROJECTS

Twitter Clustering Project   https://emsal.me/blog/4
- Conducted a machine learning analysis using Python and Julia.
- Implemented the ISOMAP clustering algorithm on a social network graph structure to identify distinct groups.

This Pokémon Does Not Exist   https://github.com/emsal1863/pkmn_doesnotexist
- Developed a machine learning project in TensorFlow that uses a variational autoencoder to generate novel Pokémon sprites. Entered into nwHacks 2020.

Resolvplox   https://github.com/emsal1863/resolvplox_alt
- Created a 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
- Created a program written in C that allows users to run processes with all outgoing TCP traffic going through a SOCKS5 proxy.

TECHNICAL SKILLS

- Areas of expertise: Algorithms, Machine Learning, Statistics, Backend development, Web development
- Programming languages: Python, C++, Go, Java, Scala, R, JavaScript, Julia
- Databases: PostgreSQL, MySQL