

# Avyay Agarwal

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avyayagarwal.me

## EXPERIENCE

### Tesla

#### Incoming Data Engineering Intern

Fremont, CA  
Sep - Dec 2021

- Incoming Data Engineering Intern on the Intelligence Logistics team at Tesla

### Twitter

#### ML Engineering Intern

San Francisco, CA (Remote)  
Jun - Sep 2021

- Currently working on building and scaling machine learning pipelines for detecting compromised user accounts

### Squarepoint Capital

#### Data Engineering Intern

Montreal, QC  
Jan - May 2021

- Developed multiple ETL pipelines to support quant trading strategies across global markets using Python, PostgreSQL, GCP, Nomad and Bamboo
- Built and architected a search platform for data discovery across on-prem and cloud clusters using FastAPI, Elasticsearch, Docker, Kubernetes and GKE
- Managed on-call production support solving multiple issues everyday across all active data engineering projects globally

### LoyaltyOne

#### Data Science Intern

Toronto, ON  
Sep - Dec 2019

- Developed a Key Driver Analysis model to analyze sales drivers across promotional and organic factors with 89% accuracy using PySpark, Scikit-learn and AWS
- Built a recommendation engine yielding a 52% click-through rate for customized product offers using PySpark and SparkML
- Productized a suite of ML models resulting in a 67% decrease in model development time

### LoyaltyOne - Zero Gravity Labs

#### iOS Developer Intern

Toronto, ON  
Jan - Apr 2019

- Developed an Augmented Reality iOS app using Swift, ARKit and AWS to provide a personalized and interactive retail shopping experience
- Created a recommendation model to generate product synonyms using N2V embeddings over transactional data using PySpark and MySQL
- Integrated real-time product identification using CoreML to drive product engagement

### Economical Insurance

#### Software Developer Intern

Waterloo, ON  
May - Aug 2018

- Developed a quote data ingestion platform that increases node performance by 1500% using Scala, Spark and Apache Hadoop
- Implemented a Natural Language Processing model to analyze customer satisfaction using Sentiment Analysis with 80% accuracy

## ACTIVITIES

### Astra Labs

#### Android Developer

Costa Mesa, CA (Remote)  
Dec 2020 - May 2021

- Worked on the Android version of Aetheria is available on iOS - <https://apps.apple.com/us/app/aetheria/id1028767781>

## EDUCATION

### University of Waterloo

2017 - 2022 (Expected)

Candidate for Hons.

Bachelor of Computer Science Co-op  
with a Minor in Economics

Dean's List - Fall 2020

President's Scholarship of Distinction

## SKILLS

### Languages

Python, Java, Scala, C/C++, Swift, Ruby,  
JavaScript, Scheme, SQL, HTML/CSS

### Data/ML

Apache Spark, Kafka, Hadoop, Solr, Airflow,  
SparkML, Scikit-learn, TensorFlow, PyTorch,  
Elasticsearch, MongoDB, MySQL,  
PostgreSQL

### Mobile/Web

Typescript, Node.js, React.js, Firebase,  
ARKit, CoreML, Android Studio, Xcode

### Other

Docker, Kubernetes, AWS, GCP, Nomad,  
Bamboo, Consul, SQLAlchemy, Git

## PROJECTS

### Safeway - Hack The North 2019

Java, Python, Google Maps APIs  
Developed an Android app using Toronto Police Open Data to help users navigate using the safest route and automatically send an SOS if unsafe activity is detected

### Jukebox

Ruby on Rails, Spotify API  
A Ruby on Rails application that uses the Spotify API to provide progression analysis and insights about your Spotify library based on the characteristics of songs

### EchoMe - UofT Hacks 2018

Java, MongoDB, StdLib, Firebase  
Developed an Android application for friends to answer questions in a Q/A style social media platform and view responses based on a barter-based algorithm to learn more about each other