

# Raymond Deng

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## EDUCATION

### University of Waterloo

Bachelor's of Mathematics Honors Statistics (Co-op) 2020

Relevant Courses: Python, Databases, Algorithm and Data structures, Applied probability, Markov Chains

## EXPERIENCE

### Software Engineer

Redwood City, California

#### Athos

- Design and created POC backend architecture with time series database that significantly improves processing speed to near real time.
- Developed ETL data pipeline from AWS to Flask App, in order to visualize and transform EMG signal data, performed muscle activation sequence detection by using multivariate statistical analysis.
- Implemented an automatic rep-detection model for EMG signals using LOESS smoothing, low pass Butterworth filter and continuous wavelet transform.

### Software Engineer (Co-op)

Toronto, Ontario

#### ShopBonsai

- Developed recommendation engine in flask using collaborative filtering that utilize high dimension, low-density user data.
- Integrated custom Word2Vec, Doc2Vec models into backend, trained on in-app articles and applied cosine similarity between word embeddings to improve article recommendation system.
- Built various data pipelines using GCP and Kubernetes to continuously pull data from third-party merchants.

### Fullstack Developer

Waterloo, Ontario

#### WalterFedy

- Developed the entire company's service portal from scratch using Django. The site is live on AWS Elastic Beanstalk and is used by 400+ employees.
- Setup automatic deployment system using Jenkins and Docker.
- Implemented multiple request and checkout systems and email notification servers as well as permission groups within portal.
- Integrated search functionality for cross-model searching across the app.

### Software Engineer (Co-op)

Toronto, Ontario

#### TradeRev

- Developed live feature of email notification using AWS SQS service.
- Created mock API using AWS lambda functions to test developing feature.
- Integrated Support Tool to attach VRF forms to trade using Grails and Angular.

### QA Automation Developer (Co-op)

Toronto, Ontario

#### TradeRev

- Designed united test cases around Ruby on Rails framework.
- Developed automated test cases using Android Espresso.
- Written thorough test documentation for app.

## PROJECTS

### NBA Score Tracker

- A chrome extension that is made for fans to be able to easily keep track of the scores of NBA games.
- User has able to dynamically filter by teams.
- Published on chrome store with 5 star rating.

### Conway's game of life

- A 'zero-player-game' built with React and Redux that imitates cellular automaton.
- The player will be able to change generation speed, grid size as well as generate pre-built patterns.

## SKILLS

**LANGUAGES & DATABASES:** Python, R, Java, JavaScript, Git, SQL, GraphQL, Bash

**FRAMEWORKS:** Django, Flask, Ruby on Rails, React & Redux, MVC, AWS, GCP, Docker