



ROBERT XU

SOFTWARE ENGINEER

🏠 robxu.me

☎ 415 813 8565

✉ rx@robxu.me

in /robert-xu

🐙 /robertycxu

SKILL SET

Languages: Java, C++, JavaScript (ES6), Ruby, Python, Golang, Elm, HTML/CSS

Technologies: Git, SQL, Node, Rails, Flask, React, Redux, GraphQL, Elasticsearch, Android, OpenCV

Infrastructure: Docker, Vagrant, AWS, Kubernetes, CircleCI, Bash, Zsh, Vim, tmux

EXPERIENCE

Square

Software Engineer Intern, San Francisco

Sep 2018 - present

- Working with the Operations team on Caviar to develop server-side technologies for courier job and delivery routing
- Built fraud-detection data pipeline between Python and Ruby microservices to prevent location spoofing and automated ability to disable fraudulent users; reduced fraud instances by 32%
- Spearheaded design for data aggregation Flask microservice used to curate machine learning datasets

Globality Series C startup backed by Sheryl Sandberg building an AI powered B2B marketplace

Software Engineer Intern, Menlo Park

Jan 2018 - Apr 2018

- Developed global user presence capabilities using Pusher event streams with Python, GraphQL, Node, CircleCI
- Created rich text editor with React/Redux and Apollo capable of saving editor state; enforced database protocol for preventing cross-site scripting through server and client-side sanitization
- Designed diagnostic tool for determining user permissions across API endpoints in Python microservices

Jewlr

Full-Stack Developer Intern, Toronto

Apr 2017 - Aug 2017

- Built Content Management System with authentication for product, sales data using Rails, Elasticsearch, and deployed with Docker, AWS
- Led effort to break up product data into separate service; administered corresponding ETL pipeline and API; wrote rake task that increased import speeds by 50%, supporting company expansion into the EU and UK
- Architected QR encoded Ruby state machine, increasing production process speeds by 75% at fulfillment centers

RESEARCH

University of Waterloo

Undergraduate Research Assistant, HCL Lab

Apr 2018 - Aug 2018

- Worked under Prof. Dan Vogel in the Human-Computer Interaction Lab to develop gesture based, QR code scanning solutions for the visually impaired
- Authored optical flow detection programs in C++ and Java (android) to discern unique permutations of finger trace patterns in a constrained space using OpenCV

Massachusetts Institute of Technology

Research Assistant, Remote

July 2015 - Aug 2015

- Enhanced pattern recognition program that predicts synthesis of novel materials using data from materials science papers; wrote script to encode papers into Python dictionaries forming directed graphs

PROJECTS

Dashboard

Aug 2017

- Created team collaboration web-app with Rails, React, MySQL that allows users to join a team or create a personal dashboard; includes ability to authenticate with Facebook

Internet Thoughts

Sep 2016

- Developed sentiment analysis web-engine using Node, Twitter API that returns percent positivity and negativity Twitter users associate with search query; fed NLP algorithm with text corpus data

EDUCATION

BCS Computer Science (Data Science), University of Waterloo

2016 - present

- Received President's Scholarship of Distinction and Retiree's Scholarship

Certified Oracle Java SE 8 Programmer

Aug 2016