

## Experience

2017 Q3 - Present

Staff Software Engineer

### Everyday Robots (Alphabet/X)

Tech Lead, owning large components of our ML data platform.

- Created the human annotation infrastructure behind our computer vision and RL efforts. The system collected XX million human annotations.
- Created systems to flexibly create training/evaluation datasets for nightly model refreshes. Used in multiple ML projects across Everyday Robots and Alphabet.
- Led development of the evaluation tools used daily by the Perception Team to assess model performance.
- Owned the system used to index, process, and serve the large stream of image, sensor, and text data coming from our fleet of robots.

2014 Q3 - 2017 Q2

Senior Software Engineer

### Google Fiber

Tech Lead/Manager leading a small team of engineers on projects to increase customer happiness.

- Led a team of 4 to implement a real-time AI assistant that helped our support agents efficiently answer customer questions over the phone.
- Productionized and launched our customer churn models.
- Built a realtime services to detect whether customers were likely actively watching TV. This was relied on for TV ad insertion.

2013 Q1 - 2014 Q3

Owner

### Algorithm Shop

Started Algorithm Shop where I did contract work across a variety of industries.

- Implemented algorithms to query structural and geometric attributes of proteins for a scientific software company.
- Worked in Libya for a UN project to help build a voter id systems for their 2014 elections.
- Built a proof of concept real-time aggregation framework for a smart-meter company.
- Built text classifiers for an online marketplace startup.

2011 Q2 - 2012 Q4

Senior Software Engineer

### Obama For America

One of the initial SWEs in Obama's 2012 reelection campaign.

- Wrote a voter/donor record matching system to merge identities across databases, which was critical for accurate modeling. I exposed this as a nightly country-wide dataset, as well as provided a service to merge in new records.
- Core member of "Project Narwhal", the campaigns primary organizing API. Created the system for real-time metric aggregation to give roll-ups for our 2.2 million volunteers.

2007 Q4 - 2011 Q2  
Software Engineer

## Google

I worked on Google Books (intern), Google Analytics, and AdWords Payment Fraud.

- Wrote a matching system to surface links between a payment fraudster's closed accounts and their similar looking accounts that were still active.
- Incorporated risk signals into the our Fraud Ops team's account review tools.
- Completed various signal engineering projects within the core "Risk Engine" used to detect payment fraud.
- Wrote testing frameworks for the Google Analytics Backed team, both for large-scale diff-testing as well as for smaller scale unit testing.
- In Google Books I worked on finding links where one book is quoting another. Listed as a co-inventor on patent [US20090055389](#).

## Education

2003-2007  
3.78 GPA

## University of Washington

B.S. Computer Science, B.A. Mathematics

- Coauthor of a [FOCS paper](#) with James R. Lee.
- Researched particle filter approaches to WiFi based localization with Dieter Fox
- Worked on numerical modeling of stochastic processes with Stephen Rhode.
- Took graduate courses in algorithms, complex analysis, robotics, complexity, and complex analysis.
- TA for digital design (hardware), intro programming, and discrete mathematics
- Studied abroad in Italy (writing), Russia (math), and Spain (language).

## Skills

Currently Productive: C++, Python, SQL

Previously Productive: Tensorflow, Java, Golang, Scala