Experience

2017 Q3 - Present Staff Software Engineer

Everyday Robots (Alphabet/X)

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

- Wrote the uploading and processing framework used to index robot log data (text, image, sensors) and do downstream offline processing.
- Led development on the system that serves robot logs from cloud APIs to our visualization tool.
- Worked cross functionally with Robotics at Google to drive org-wide platform adoptions.
- Created our human annotation framework which drove our perception and RL projects. 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 Alphabet.
- Led development of the evaluation tools used daily by the perception team to assess model performance.
- Wrote low-level systems code for logging and time synchronization, both on robot and in simulation.

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 listened to CSR support calls and helped agents answer custome questions.
- Built a realtime service to infer customer presence for TV ad insertion.
- · Collaborated with analysts to build churn models.

2013 Q1 - 2014 Q3 Owner

Algorithm Shop

Started <u>Algorithm Shop</u> 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 build 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 is critical for modeling. Exposed this as batch country-wide merges as well as via a real-time service.
- Core member of "Project Narwhal", the campaigns primary organizing API. Created the system for real-time metric aggregation to give rollups 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 Ops team's 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