# Penn Haven Boston, MA, CTO

09/2017 - present

At Penn Haven we use data and software to improve the process of buying and running small businesses.

As CTO of our growing team I make sure that our technology choices are pragmatic for short-term goals and bottlenecks, while thinking ahead for our long-term goals.

NGP VAN, Inc Somerville, MA, Software Engineering Team Lead

11/2011 - 05/2015, 06/2016 - 09/2017

Progressed from QA Automation to leading one of the largest engineering teams at the company

- Worked individually on custom development for 2012 Obama campaign initiatives, led teams for high-stakes 2014 and 2016 election systems and production support:
  - Upgraded predictive dialer system to target and track millions of successful phone calls in 2014
  - Upgraded mobile canvassing tools to target and track millions of door-to-door conversations in 2016
- Kicked off a multi-million dollar project to create the industry's most powerful high-volume email system
- Analyzed usage patterns and error logs to predict when our upstream vendors and partners would have capacity issues
- Screened and interviewed dozens of employees.

### Center for International Development, Harvard Cambridge, MA, Product Architect

05/2015 - 04/2016

- Launched high profile open data visualization websites for government partners in Mexico, Colombia, and Peru
- Managed a mixed team of software engineers, data scientists, designers, and visualization experts in an environment that mixed academic research, public facing tools, and high level government consulting
- Developed novel datasets allowing extremely detailed industry, employment, and trade data analysis
- Worked with high-ranking government agencies, officials, and sponsors such as Mexico's Chief Minister of Finance
- Bridged between tech team and diverse stakeholders including Harvard professors, outside researchers, government officials, and project sponsors from Mexico, Colombia and Peru as well as the US International Trade Commission

# Sino Investments, Detroit, MI, Co-Founder, Technical Director

10/2010 - 9/2011

- Created financial model supporting SBA loan for brewery expansion: modeled expansion effects including changes to labor allocation, equipment depreciation, distribution of sales across 120 beer varieties, material costs and financing costs
- Responsible for internal technical operations as well as technical problem-solving for clients: internal and external financial projections, CRM system, time tracking, project budgeting, website design and hosting, email, file sharing
- Signed memorandum of understanding with 4.7 Billion RMB development project in Guangzhou, China

# IBM OpenPages (then OpenPages, Inc.), Waltham, MA, Software Engineering Intern

7/2010 - 12/2010

- Developed a java desktop app to aid multinational companies in global IT risk management planning, using a large proprietary dataset of compliance data
- OpenPages was later acquired by IBM, where consultants still heavily use my original tool.

# Econometric Analysis of Chinese Character Learning on Skritter.com (Senior Research Project)

2/2010 - 6/2010

- Students of Chinese and Japanese use Skritter to learn Hanzi/Kanji using researched-backed spaced repetition algorithms.
- Using over 15 million data points from 3,000 students, I modeled the probability that a learner would forget a Chinese character at a certain time after review, identifying areas to improve the product's core algorithm.

# Smart Semester Books Washington, DC Founder

4/2009 - 12/2009

Bought and sold college texts. I scraped data so that I could market straight to big classes with profitable books.

# Culture Gateway, Beijing, China, Interim Director

6/2007 - 11/2007

- Ran marketing and sales for contracts that led to teaching over 7,000 students
- · Resolved employment, housing, arrival, visa, and registration difficulties for inaugural participants

#### EDUCATION

# George Washington University, BA with double major: Computer Science, Economics