

## Research and Work Experience

- **Wise.io, from GE Digital**

*Principal Data Scientist*

*May 2017 - June 2019*

- Designed and led large Aviation collaboration, across 7 time zones, for introducing machine learning into real-time airplane engine monitoring & diagnosis. Scope of project was all airplane engines monitored by GE, who manufactures 60% of the world's jet engines. Built key production ML components.

- **Pinterest**

*Data Scientist*

*October 2015 - April 2017*

- Created the Signal Program: process for designing, evaluating and launching signals.
- Created the Signal Repository: all known information on thousands of signals.
- Signal Analysis: analyzed the strengths and weaknesses of signals for key data products.
- Data Ecosystem: analysis of signal impact on creating personalized experiences for users.
- Data Products: Category & Performance Signals, Spam Free Data and search experiments.
- Signal programs and analysis directly impacted 50+ machine learning engineers.

- **Startup**

*Data Scientist*

*June 2015 - Sept 2015*

- Initial data stack including metrics and product scoping for Series B health care startup.

- **LinkedIn**

*Staff Data Scientist & Tech Lead*

*Sept 2013 - June 2015*

- Helped hire, onboard and grow a team of 11 data scientists working on consumer analytics.
- Embedded data scientist in the Growth Team working to systematically identify, scope and experimentally test areas of opportunity.
- Product expertise includes: Connections, Follows, User Engagement and Registration
- Social Economic analysis: Viral Content, Gender Balance, LinkedIn Growth and Job Referrals
- Data Product Prototypes: Delphi, What You Missed and Follow Network

- **Yelp Inc**

*Search and Data Engineer*

*June 2012 - Aug 2013*

- Built data pipelines and metrics for Search Experiments, User Engagement and Happiness
- Experimental Improvements to Search Result Rankings
- Data Product Prototypes: Query Normalizer, Human Eval for Search, Personalized Search and Qype Data Ingestion

- **Facebook Inc**

*Growth and Product Insights Intern*

*Summer 2011*

- Analyzed acceleration and deceleration of user engagement with Facebook

- **Cornell University**

*Networks Research with Prof. John Hopcroft*

*2010-2012*

- Researched and computed structure of communities in large networks. Studied evolution and flow of information between communities in social, collaborative, and similarity networks.

*Head Teaching Assistant for Java and Discrete Math (600+ students & 27 TAs)* 2011 - 2012

*Lecturer for Functional Programming and Data Structures (2<sup>nd</sup> foundational course)* 2010

*Research Assistant with Prof. Alexander Vladimirsky* 2007-2009

- Researched computing PDEs to minimize the expected response times of ambulances

#### University of California, Berkeley

- *Research Assistant with Prof. James Sethian* 2005-2007

- Created variations of the Traveling Salesman Problem. Solved adaptations with PDEs.

#### San Diego Supercomputer Center

- *NSF REU Research Assistant under Amit Majumdar for parallel data transfer* Summer 2005

### Education

- **Cornell University** Ithaca, NY  
*Ph.D. Applied Math, M.S. Applied Math, emph in Social Networks* 2007 - 2012

- **University of California, Berkeley** Berkeley, CA  
*B.Sc. Electrical Engineering and Computer Science, minor in Applied Math* 2003 - 2007

### Skills

- **Current Coding:** Python(advanced), Map-Reduce frameworks(advanced), Hive
- **Prior Coding:** Pig, JavaScript, Java, Hadoop, C/C++, MPI, R
- **Network Analysis:** Social & Economic Trends, Community Detection, Structure of large networks
- **Numerical Analysis:** Optimization, PDEs, Linear Algebra, Iterative and Non-Iterative Methods
- Diverse background in Math and CS promotes rapid development of new skills as needed

### Selected Talks and Publications

- **Code Enterprise - Speaker**  
*Pinterest Data Science* 2016
- **Strata NY - Featured Speaker**  
*Replication in Data Science* 2016
- **Structure Data - Panelist**  
*Doing Unicorn-Scale Data Science* 2016
- **Strata San Jose - Featured Speaker**  
*Economic Insights from the LinkedIn Network* 2015

- **Sentiment Analysis Summit in San Francisco - Keynote**  
*Search, Growth & Engagement Metrics: Snake Oil or North Stars?* 2015
- **PNAS - Author**  
*Fast Marching Methods for the continue Traveling Salesman Problem* 2007

## Hobby Data Science Projects

- **Academic Relations:** National Science Foundation panels, UC Berkeley Extension Board and teaching classes for UC Berkeley School of Information's Master in Data Science program.
- **Emerging Speakers in Tech:** Created a supportive community for conference speakers.
- **Additional:** Book reviews for O'Reilly Media and advising for developing data scientists