Bridging the Gap: Careers in Data Science
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Bryan Moy

UCLA
2009
B.S., Environmental Science

UCLA
2016
Ph.D, Environmental Health

Seven Bridges
2016
Scientific Engagement Manager

Columbia University
2011
M.P.H., Epidemiology

Insight
2016
Health Data Science Fellow

Insight
2018
Program Lead, Health Data Science
Matt Rubashkin

Johns Hopkins  
2010  
B.S., Biomedical Engineering

UC Berkeley-UCSF  
2015  
Weaver Laboratory  
Ph.D, Bioengineering

Silicon Valley Data Science  
2016  
Data Engineer

LexiconAI  
2017  
CEO & Co-Founder

Insight  
2015  
Data Engineering Fellow

Insight  
2018  
Program Lead, Artificial Intelligence
Outline

- About Insight
- Health industry + trends
- What is data science
- Health and data science
- Case studies
- Tips and tricks
500+ Companies and Research Institutions
1800+ Alumni
INSIGHT

DATA ENGINEERING
DATA SCIENCE
HEALTH DATA SCIENCE
ARTIFICIAL INTELLIGENCE
DATA PRODUCT MANAGEMENT
DEVOPS

Upcoming Session: June 3rd, 2019
Application Deadline: March 25th, 2019
Visit our website to apply or sign up for notifications!
Major tech companies are making health a key focus of their businesses.
The health and biotech sectors are growing and generating huge amounts of data.
Many health companies are not able to appropriately analyze their growing datasets.

- 1400% increase in health data by 2020
- $100B in healthcare benefits/year
- Since 2013, only 50% of all data jobs have been filled in SF
What is data science?

- Coding
- Math and Statistics
- Domain Expertise
  - Machine learning
  - Data Science
  - Danger Zone!
  - Traditional Research
What do data scientists do?

Obtain

Scrub

Explore

Model

Interpret
There are many unique challenges to analyzing *health* data.
Health researchers are primed to address these critical data challenges

“The best data scientists tend to be ‘hard scientists,’ rather than computer science majors”
-DJ Patil, U.S Data Chief
What are the differences between health scientists and a data scientist?

- **Collect** and **clean** data
- Use **programming** and **statistics** to discriminate between signal and noise
- **Convey results** to the scientific community

- **Collect** and **clean** data
- Use **programming** and **statistics** to discriminate between signal and noise
- **Convey results** to the team/company/investors
- **Make** data-informed **decisions** that directly impact the product, and ultimately the business and people's health
Health researchers make great data scientists

Data Intuition
Critical Thinking
Statistics
Domain Expertise
Coding
Communication
What does health data science look like in practice?
Health Management

- **Focus**: Obesity management and prevention
- **Product**: Digital scale + online coaching
- **Data**: Weight measurements (continuous) + text conversations
- **Projects**
  - Logistic regression for classification of push notifications
  - NLP for sentiment analysis and adherence
  - Linear regression for predicting long-term trends
Digital Therapeutics

- **Focus**: Chronic diseases
- **Product**: Digital prescription apps + tests
- **Data**: Survey data + text entries + app engagement
- **Projects**:
  - User adherence to prescriptions
  - Classification of depression severity
  - Signal processing used for screening patients for Parkinson’s disease
Public Health Management

- **Focus**: Developing countries and non-profit organizations
- **Product**: Develop software platforms for harnessing PHI
- **Data**: Longitudinal PHI
- **Projects**:
  - Anomaly detection for malaria outbreaks
  - Time series analyses for resource allocations
  - Outbreak investigations
INSIGHT HEALTH DATA FELLOWS PROGRAM

An intensive 7-week program for PhDs and MDs leading to a career in health data science

APPLY NOW

READ THE WHITE PAPER

Want to be notified of future dates? CLICK HERE
INSIGHT
ARTIFICIAL INTELLIGENCE
FELLOWS PROGRAM

An intensive 7 week professional training fellowship leading to a career in artificial intelligence

APPLY NOW
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Want to be notified of future dates? CLICK HERE

Work in a collaborative environment with other scientists, researchers, and engineers.
There are LOTS of opportunities out there for you
Start by asking lots of questions

What is data science and where do I fit in?

Which industries am I interested in?

What companies/institutes are at the intersection of those two things?

How can I best prepare?
Tips

Connect: Join LinkedIn. Read Twitter. Subscribe to DS weekly. Go to Meet-ups or watch online. Find out if nearby universities have a center for data science. Look into civic data groups: DataKind, Code for America. Where are alumni from your group now? Talk with them!

Talk to people: Learn terminology, ask about what tools people use at places you’re interested in working (what should you learn and demonstrate?), practice describing your research. Practice interviewing.

Build evidence: Do small non-academic projects to show your interest, post code on Github, write a blog post. Write a one-page resume. Show it to people outside your field — can they understand what you did?

Apply for Insight! We help with all of these things. :)
Thank you!

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