Insight

Bridging the gap: Careers in data science
I. What does a data scientist do? What are examples of what data scientists do in industry?

II. What are the skills that companies and hiring managers look for in data scientists?

III. How does Insight help people transition from academia to DS?
Who am I?

Allen Chang
PhD, Cognitive Neuroscience
What does a data scientist do?
What is data science anyways?

- Analytics
- Data Products
- Machine Learning
- Engineering
Data science is a broad term

- Analytics, experimentation, visualization, and data stories.
- Example: A/B Testing (Multi-Armed Bandit)

example.com/a.html
22% conversion

example.com/b.html
52% conversion
Data science is a broad term

- Data Products and Dashboards
Data science is a broad term

- Machine Learning
Data science is everywhere

**HEALTH**
- Memorial Sloan Kettering
- Flatiron Health, ZocDoc

**MEDIA**
- The New York Times
- MTV, Netflix
- Nielsen

**SOCIAL**
- Facebook
- Twitter
- LinkedIn

**FINANCE**
- Bloomberg
- Capital One Labs
- AmEx

**ADVERTISING**
- Sailthru
- Tapad
- Distillery

**ENERGY**
- Bright Power
- EnergyHub

**TRAVEL**
- AirBnB
- TripAdvisor

**APPAREL**
- Rent the Runway
- StitchFix
- Bonobos

**RETAIL**
- Etsy
- Macy’s
- Birchbox

**GOVERNMENT/NON-PROFIT**
- The City of NYC
- The Census Bureau
- DataKind, Murmuration
Industry example #1: News and Media

Types of problems you might need to solve if you worked in the news and journalism space

- What headlines do we show each user?
- What pictures associated with stories should we show?
- At what time of the day should new content be released?
- What advertisements should be with which articles?
Indstry example #2: E-commerce and Retail

- Types of problems you might need to solve if you worked in e-commerce
Job of a scientist

- Collect and clean data
- Use programming and statistics knowledge to discriminate between signal and noise
- Convey results to the scientific community
Job of a **data** scientist

- Collect and clean data
- Use programming and statistics knowledge 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
What are the skills that companies and hiring managers look for in potential data scientists?
1. Costs lots of time and money.

2. False positives have a negative impact on short and long term work.

3. For these reasons (and more), companies seek as much evidence as they can about whether candidates have skills they need.
**What evidence are companies looking for?**

<table>
<thead>
<tr>
<th>Product</th>
<th>Identify and translate high value problems into a data problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Execution</td>
<td>Solve and validate their solution against problem-specific metrics.</td>
</tr>
<tr>
<td>Communication</td>
<td>Communicate their results back to stakeholders.</td>
</tr>
</tbody>
</table>
Technical Skills

- Python
- R
- AWS
- Google Cloud
- Microsoft Azure
Technical Skills

- **Statistics**
  - How do you explain whether a test you ran was causal in a change?

- **Machine learning knowledge (under the hood!)**
  - How do your models work? What is the math underlying the decisions a model makes?

- **Computer science fundamentals**
  - Can you write code that can be integrated by other teams?
  - Can you work on shared codebases (version control / git)
Behavioral Skills

- Are you a strong communicator?
- How do you work with other people?
- Can you complete work on a tight deadline?
- How do you take the technical details and explain it to someone that doesn’t work in your field?
How can you showcase evidence of these skills?

- **Technical**
  - Work on side projects!
    - Solve a data problem that you or others are having
    - Use this solution to make an actionable difference
    - Put up the code on github
  
- **Communication**
  - Write up your results and process

- Apply to Insight!
What to consider when looking at companies

- Size of the company
  - From large corporation to startup
- What type of role are you interested in?
  - E.g. Where in the analytics < - - - - > engineering spectrum do you want to be?
    - Domain / area of interest
- Culture fit
- Mentorship
What is Insight?
An Overview of Insight

INSIGHT DATA SCIENCE FELLOWS PROGRAM

An intensive 7 week post-doctoral training fellowship bridging the gap between academia & data science

APPLY NOW
READ THE WHITE PAPER

insightdatascience.com
7 Weeks $0 Full time Need based scholarship
Our mission

INSIGHT IN A NUTSHELL

- **INTRO WEEK**
  - WEEK 1
- **DATA PROJECT**
  - WEEKS 2-4
- **COMPANY VISITS**
  - WEEKS 5-7
- **JOB INTERVIEWS**
Collaborate with other scientists
Alumni mentorship
3500+ Insight Fellows at 700 companies
INSIGHT

PROGRAM

DATA SCIENCE
FOR PHDS

DATA ENGINEERING
FOR ENGINEERS

HEALTH
ANALYTICS

ARTIFICIAL INTELLIGENCE
FOR PHDS AND ENGINEERS

LOCATION

SEATTLE

TORONTO

SILICON VALLEY &
SAN FRANCISCO

BOSTON

NEW YORK

+ REMOTE

Next Sessions Start May

Application Deadline: Coming Soon!
Current Rutgers fellows

Steven Boada  
PhD, Astrophysics  
Winter 2020 Data Science Fellow

Melissa Kazemi Rad  
PhD, Atmospheric Sciences  
Winter 2020 Data Science Fellow

Mohsen Ghassemi  
PhD, Electrical and Computer Engineering  
Winter 2020 Data Science Fellow
Admissions process at Insight

Step 1
Apply today and mention this info-session

Step 2
15 minute initial interview

Step 3
30-minute video call with our team
How to contact me

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