# Careers in Data for Psychologists and Neuroscientists

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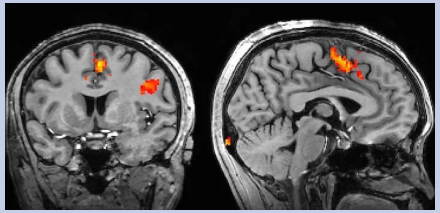
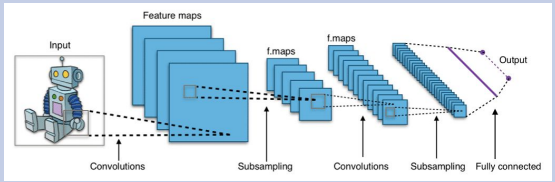





INSIGHT

# Overview

1. What kind of careers exist in data?
2. What are the different roles and responsibilities?
3. Case Study: Uber Eats: Provide Personalized Recommendations.
4. Other Industry Examples
5. What does it take to get a job in this field?
6. Insight Data Science and Transitions

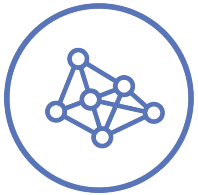
# Why increase in interest in data?

- Information Explosion & Big Data
  - People were ready to share information
  - We had means of sharing the information
- Data Driven Decisions
  - Not taking decisions based on “gut”
  - Better understanding of users
  - Personalized services: Recommendations
  - Driving business through analytics
- Technology Advancements

What kinds of careers exist in data?

# Different roles in the data space

## Data Scientist / Data Analyst



- Product Analytics
- Understanding Business
- Understanding Data

## Data Engineer

- Data Pipelining
- Distributed Storage
- Scalability

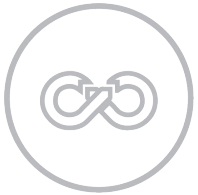
## Data Product Manager

- Market analysis
- Future of Data products
- Business growth

## ML Engineer / AI Professional

- Designing ML Algorithms
- Productionalizing ML models

## Data Infrastructure Engineer / DevOps



- Designing infrastructure
- Automated deployments
- Handling Dev pipelines

# Data careers by another name

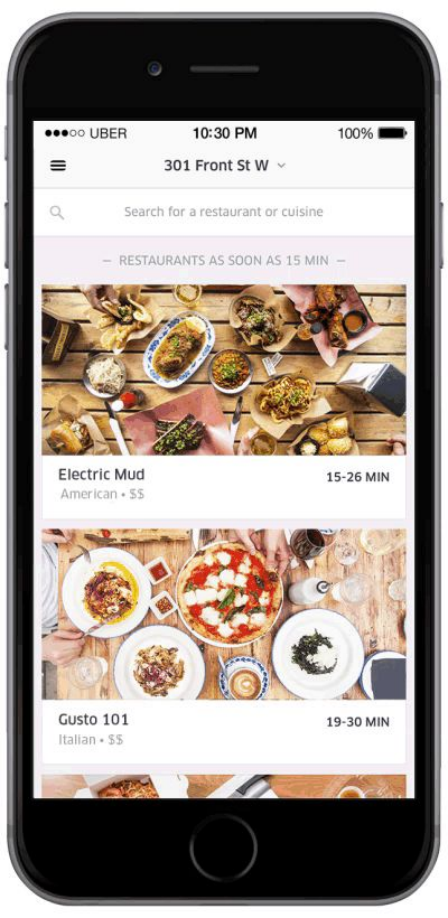
UX Research

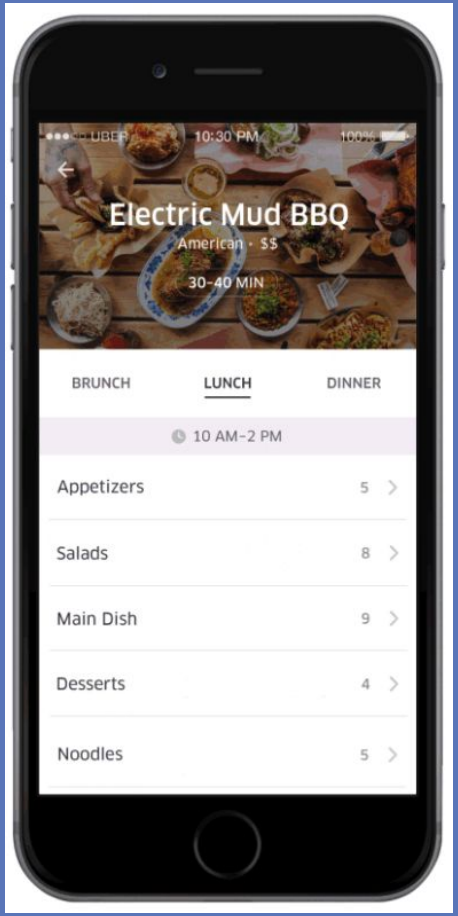
- Experimentation
- Surveys
- Focus groups
- Human-computer interaction
- Interviews

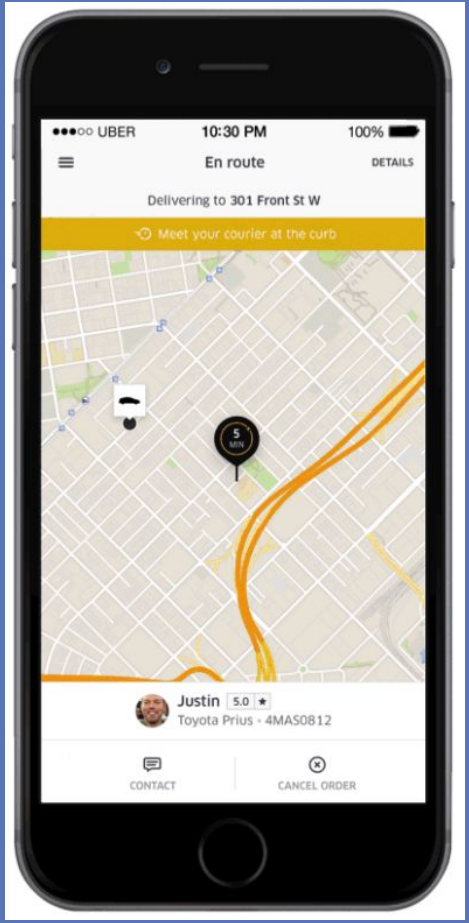
Human Factors

- Engineering / devices
- UX

# Case Study: Uber Eats



# Use Case:
# Personalized food choices

Update the options that gets shown on the app based on user preferences.

# Use case: Provide personalized food choices

- Need to capture user specific data
  - Past orders by the user
  - Famous restaurants in user's location
  - User search history, clicks??
  - Nearby Orders
- Data Product managers:
  - Identify the need for the product.
  - Work with others to define the development lifecycle.
  - Define user-testing, AB testing frameworks for the product.
- Data Scientists:
  - Analyze the User data to find out what features are important.
  - Run experiments, build out models.
  - Retrain existing models with new data.
- Data Engineer:
  - Define a pipeline to get data to scientists/analysts.
  - Automate process for new data.
  - Build a scalable data pipeline.
- DevOps engineers:
  - Maintain infrastructure for data pipelines.
  - Define development best practices.
  - Build continuous integration pipelines to auto deploy code, test them.
  - Define integration tests for the code deployed.
- Machine Learning Engineer / AI professionals:
  - Deploy models at scale.
  - Monitor models and quality of recommendation.

# 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
Dstillery

## 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?

# Industry example #2: E-commerce and Retail

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


# Industry example #3: Health

- Types of problems you might need to solve if you worked in health data

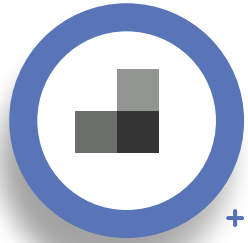
# Job of a scientist

- 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

How do you get these jobs?



# What evidence are companies looking for?

| | |
|---|---|
| **Product** | Identify and translate high value problems into a data problem |
| **Execution** | Solve and validate their solution against problem-specific metrics. |
| **Communication** | Communicate their results back to stakeholders. |

# Product/Business Skills

- Do you know the problems that the industry is tackling?
  - Applying the relevant tools / techniques to relevant problems
- Understand how to apply the knowledge to industry problems
  - Reading industry / company blogs
  - Attending meetups
  - Knowing to ask the right questions / knowing the lingo

# Technical Skills

- Experimentation / experimental design
- Statistics
- Programming (+ computer science + SQL)
- Machine learning

Knowing trade-offs of various approaches and being able to articulate them

# 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?

# Networking

- Know the right people to talk to
  - Hiring Managers
  - Technical Recruiters
- Know how to pitch yourself
  - Tailor a pitch for each role you apply to.
  - Use career fairs effectively, don't just drop in your resume.
- Meet the right people
  - Meetups
  - Hackathons
  - Fellowships/ Internships/ Bootcamps
- Know to have technical conversations (knowledge about the field will help here)

# 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 (medium or other blog post)

# Industry Resumes

- Use 1 full page and *no more*
- Minimum .5” margins on all sides
- Start with a blank page -- only include what’s relevant to your next role
- Include a Header, Skills, Experience, and Education sections
- Start each bullet with a past-tense action verb
- Use **consistent** font style and size, indent, bullet size, date format, etc.

## Writing Strong Bullets

**Situation**: Describe what you did (context, overview)

**Action**: Explain how you did it (the skills you used)

**Result**: Describe why you did it / why it mattered

# 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

# Interview Process

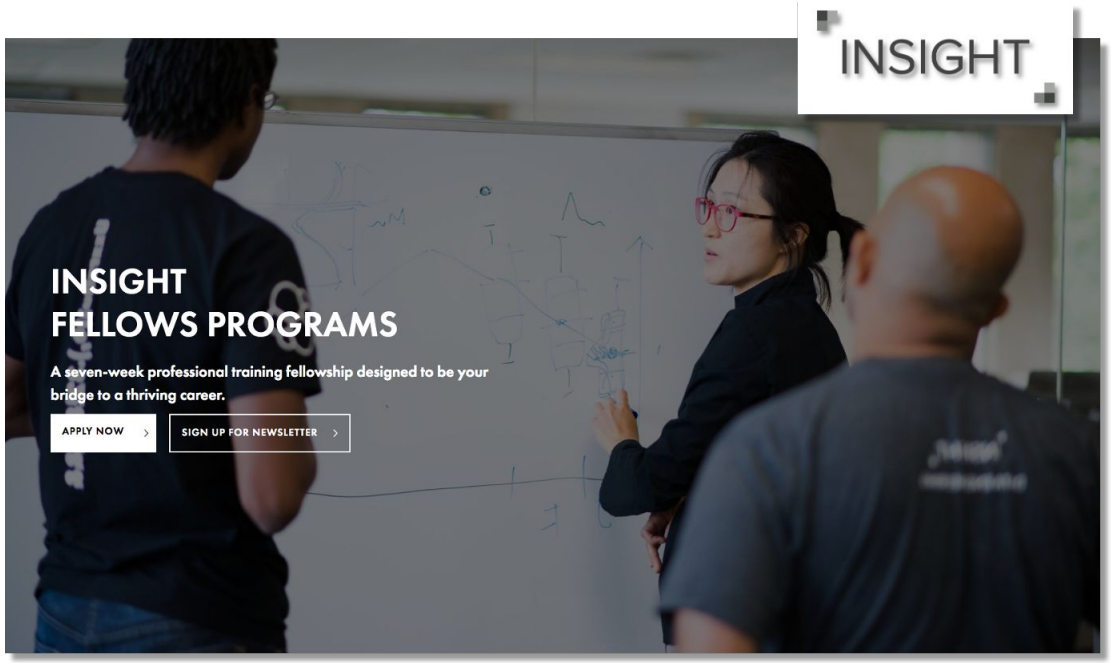
- Preparing a good resume to get a foot in the door
- A quick phone screen to get you started (behavioral or technical)
- Coding assignment
  - Timed Coding assignment (HackerRank, Leetcode)
  - Over the phone coding
  - Take home Data Challenges
- Onsite
  - 4-6 hours
  - Mix of Behavioural, Technical and data oriented
  - Speak to multiple team members
  - Topics: Designing data platforms, Whiteboarding coding questions, Technical conversations

Most importantly, be open to rejection
and
learn from your mistakes

# Insight Data Science

## Transition to Careers in Data

# An Overview of Insight

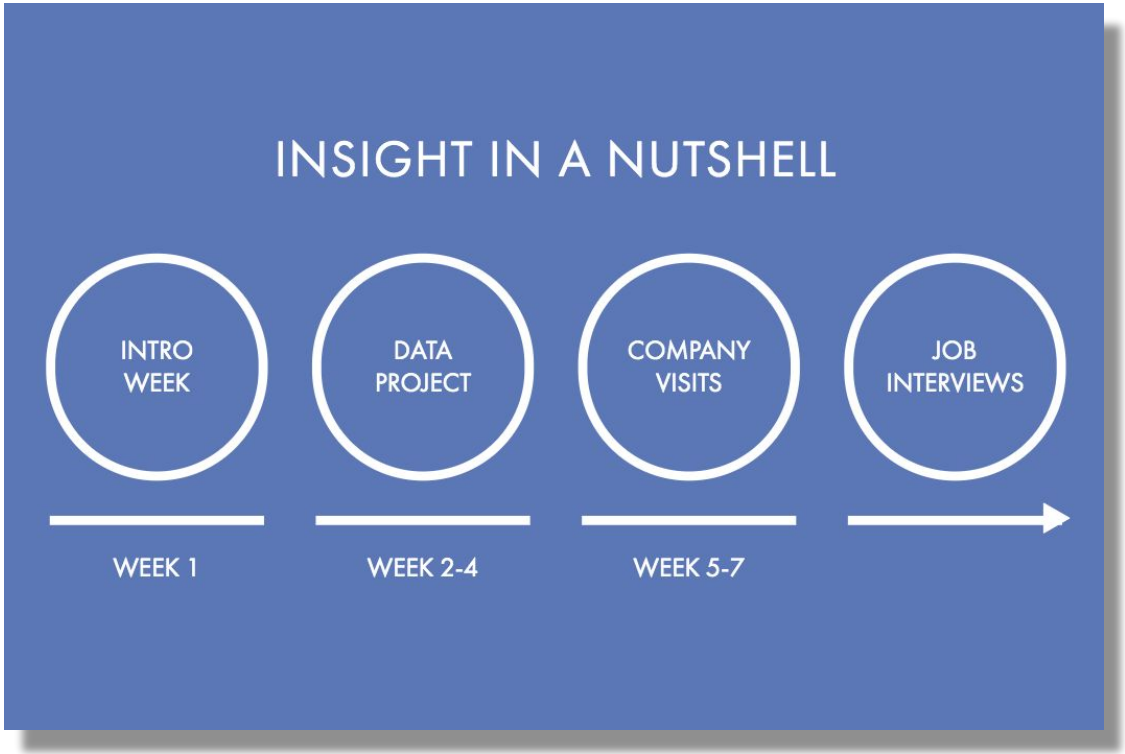



**insightfellows.com**

# Moving from higher education to Insight

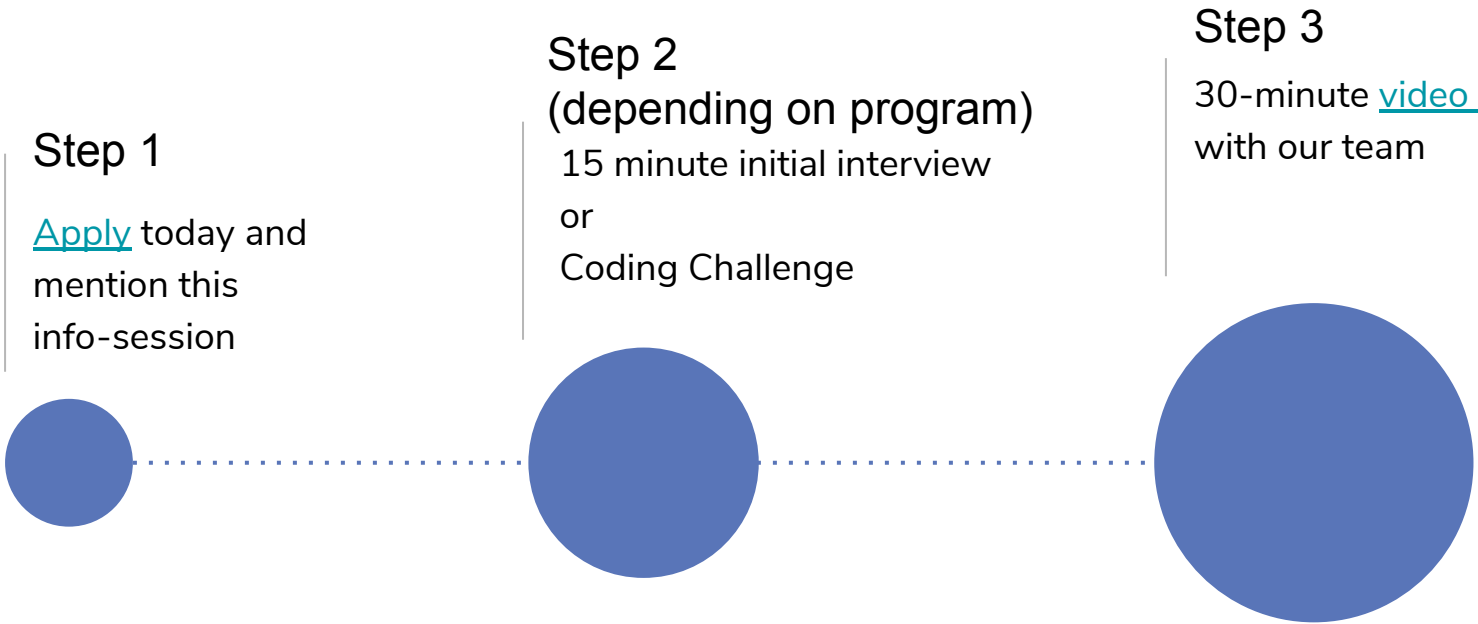
- Bridge the gap between academia and a career in data
- Program is project-based -- no classes
- Things that carry over
  - Collaboration is key
  - Mentors and alumni are there for you
- New things you'll experience
  - Tailored experience: workshops, mock interviews, deep dives
  - Access to the Insight network

# Structure of the program



# 3500+ Insight Fellows at

# Admissions process at Insight



# How to contact me

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