UCSD

DSC 90

Winter 2020

Seminar in Data Science

Dr. Colin Jemmott
(I prefer Colin)

Pronouns: he, him

Data Science (to me): deeply understanding the meaning of your data, analyzing it with honesty and creativity, and communicating results clearly.

Email: cjemmott@ucsd.edu (I like hearing from you! but check class website first)

Way too much info at https://jemmott.github.io/

Books I like: https://github.com/jemmott/books

My Path to Data Science
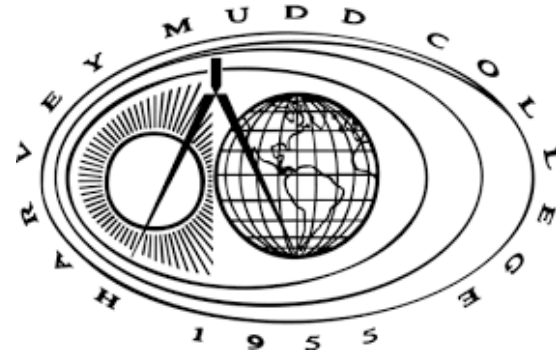
B.S. in Engineering

M.S. in Electrical Engineering
Ph.D. in Acoustics
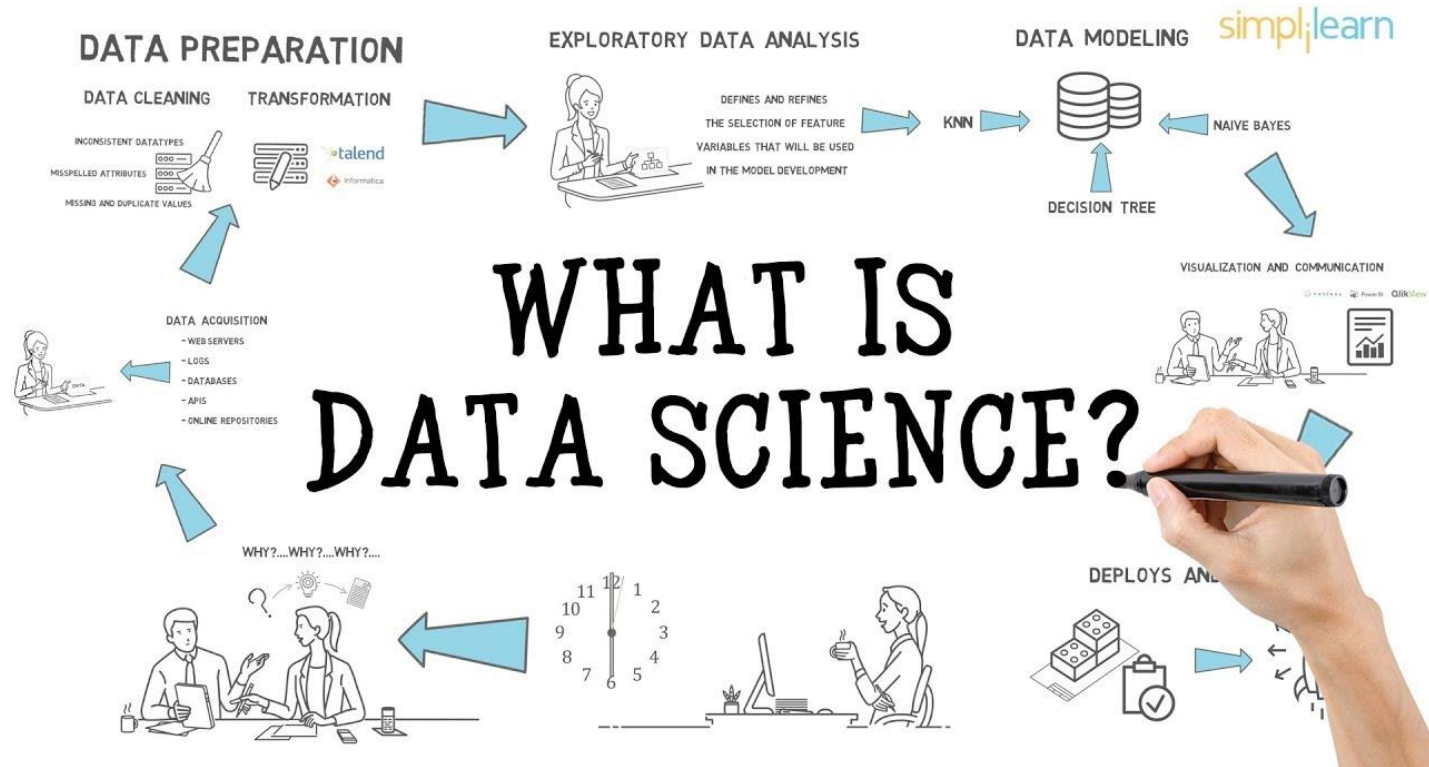
Senior Acoustical Scientist

???

Data Scientist!

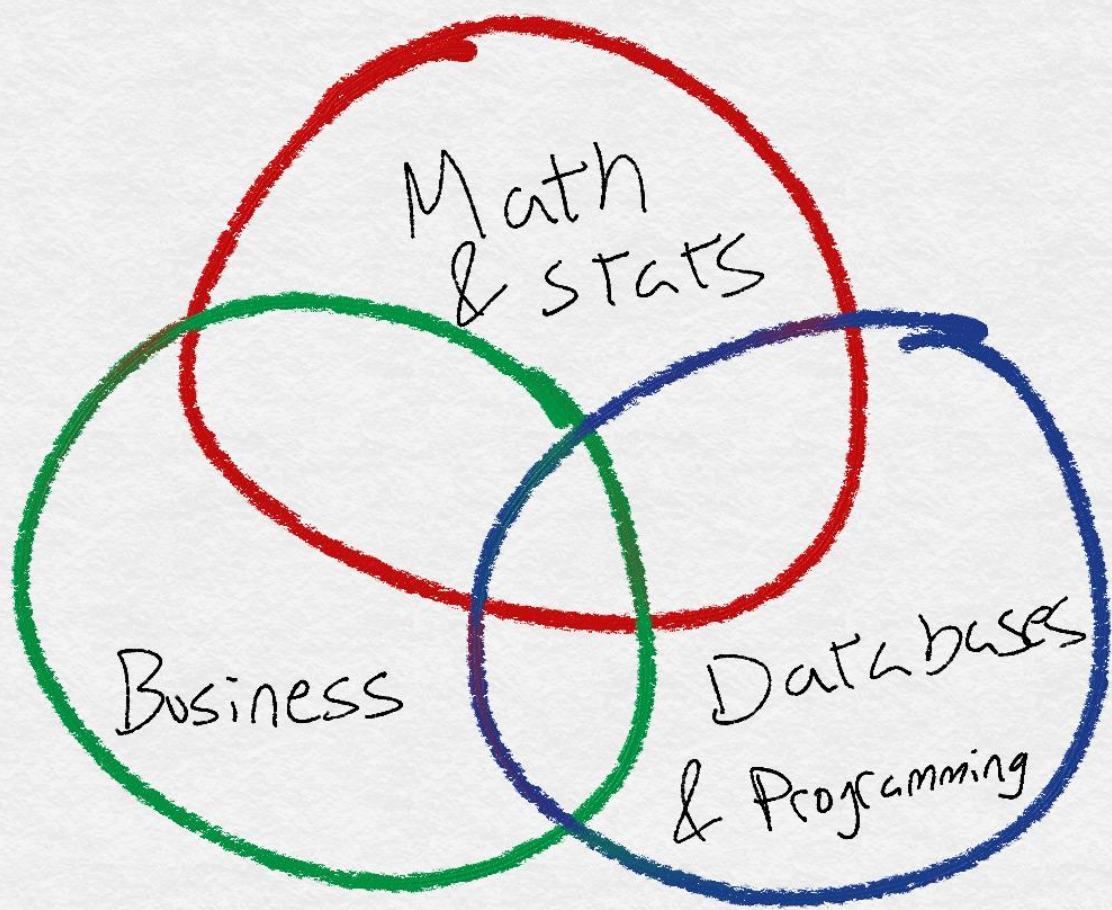# Introductions

1. Name
2. Major
3. Year
4. What is data science?

https://www.dsc90.com/

BUILD A CAREER IN
Data Science

Emily Robinson

Jacqueline Nolis

MEAP

Types of Data Science Jobs

- Machine Learning
- Analytics / BI
- Decision Science

And related
- Stats / Math
- Data Engineering
- Research Scientist

Tip: Titles vary radically. Look at the role.

Applications / Domains

- Internet (SaaS, tech)
- Finance
- Biotech
- Etc.

If data science is in demand, why is it so hard to get a data scientist job?

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Sometimes companies don't know what they want

If data science is in demand, why is it so hard to get a data scientist job?

Sometimes companies don't know how to interview

If data science is in demand, why is it so hard to get a data scientist job?

Sometimes companies don't acknowledge there are multiple ways to solve data science problems

If data science is in demand, why is it so hard to get a data scientist job?

Supply and Demand

If data science is in demand, why is it so hard to get a data scientist job?

Basically, it is super hard to demonstrate you can solve a specific company's data science problems

Goal of this class:
Learn how to demonstrate you can solve a specific company's data science problems

Ethics Note

This class is intended to help you get a job, but I will not help you get a job.

Specifically:

- This class will help you improve your resume, cover letter, presentation skills, and interviewing skill

But:

- I will not serve as a reference based on your work in this class
- I will not help you network or introduce you to people

Interview Process

☎	1. Phone interview
	2. In-person interview
	3. Case study
	4. Leadership interview & offer

My Ideal Onsite structure

Introduction
- Overview of my company and my honest pitch on why our analytics team is great
- Ask them about themselves and what they are looking for in a job
- If I do this right, the candidate is excited for the rest of the interview

Description of a recent problem
- How the project started, how they determined it was worth time and effort, their process, and their results.
- I also ask them about what they learned from the project.

Technical deep dive
- Check if they have skills in statistics, databases, programming, and interpreting data

Ask them for questions
- Not having any questions is not a good sign.

Interview Topics

Always:
- Coding (usually whiteboard)
- Applied machine learning
- Your background

Often:
- Culture fit
- Machine learning theory
- Dataset analysis
- Stats
- Business

Different Companies, Different Questions

Some Examples:
- **Airbnb—**Product Heavy, Metrics diagnostics, Metrics creation, A/B testing, Tons of behavioral questions and take home.
- **Netflix—**Product-sense questions, A/B testing, experimental design, metric design
- **Microsoft**—Programming Heavy, Binary Tree Traversal, SQL ,Machine Learning
- **Expedia**—Product, Programming, SQL, product sense, Machine learning questions about SVM, regression and decision tree

Not a pop quiz!

You should know what to expect going in, and you can take the time to prepare for it.

During the interview phase of the process, your recruiter is on your side and can usually tell you what types of interviews you'll have.

What do you want to know how to do?