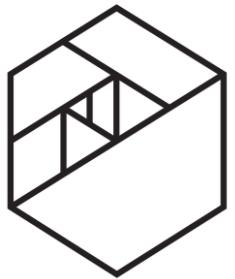


Data Science!



METIS



Why are we here?

Goal. To enrich and broaden your skills and confidence to ask & answer questions using data, statistical models, code.

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**We are data scientists.
This is data science.**

What is a data scientist?



A data analyst who lives in California



Someone better at statistics than any software developer,
better at software development than any statistician



A business analyst who lives in New York

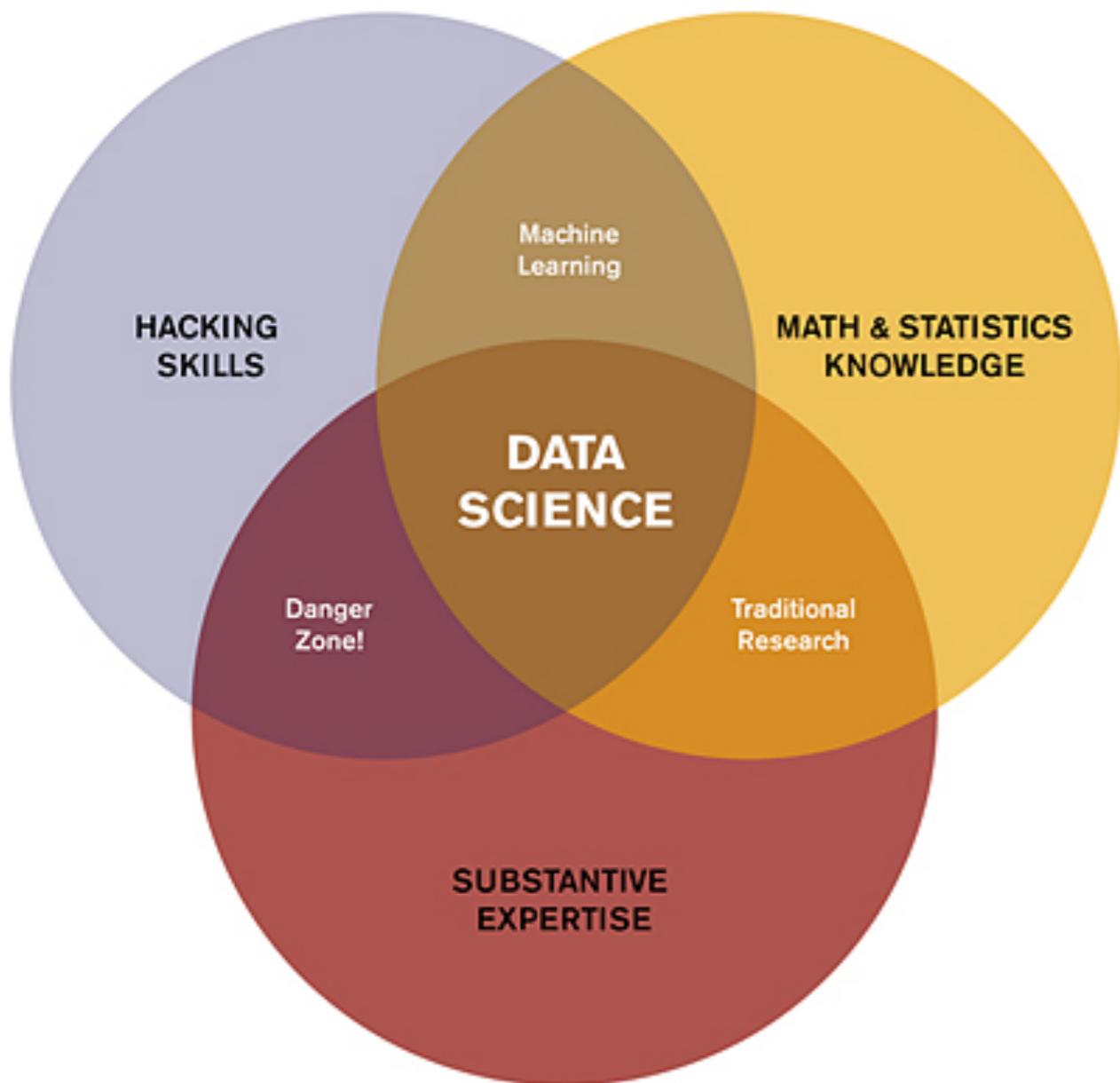


A statistician who lives in San Francisco

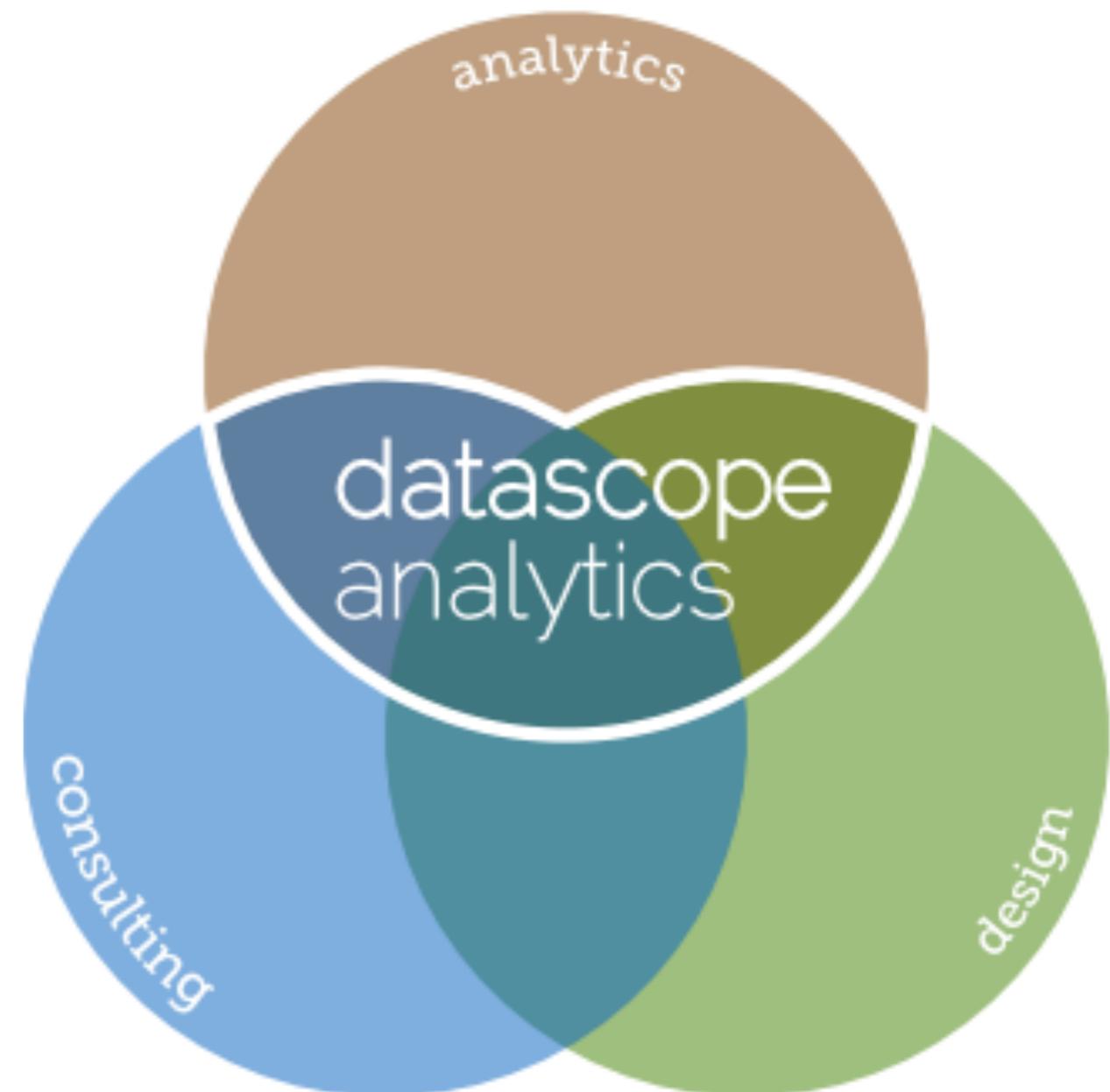
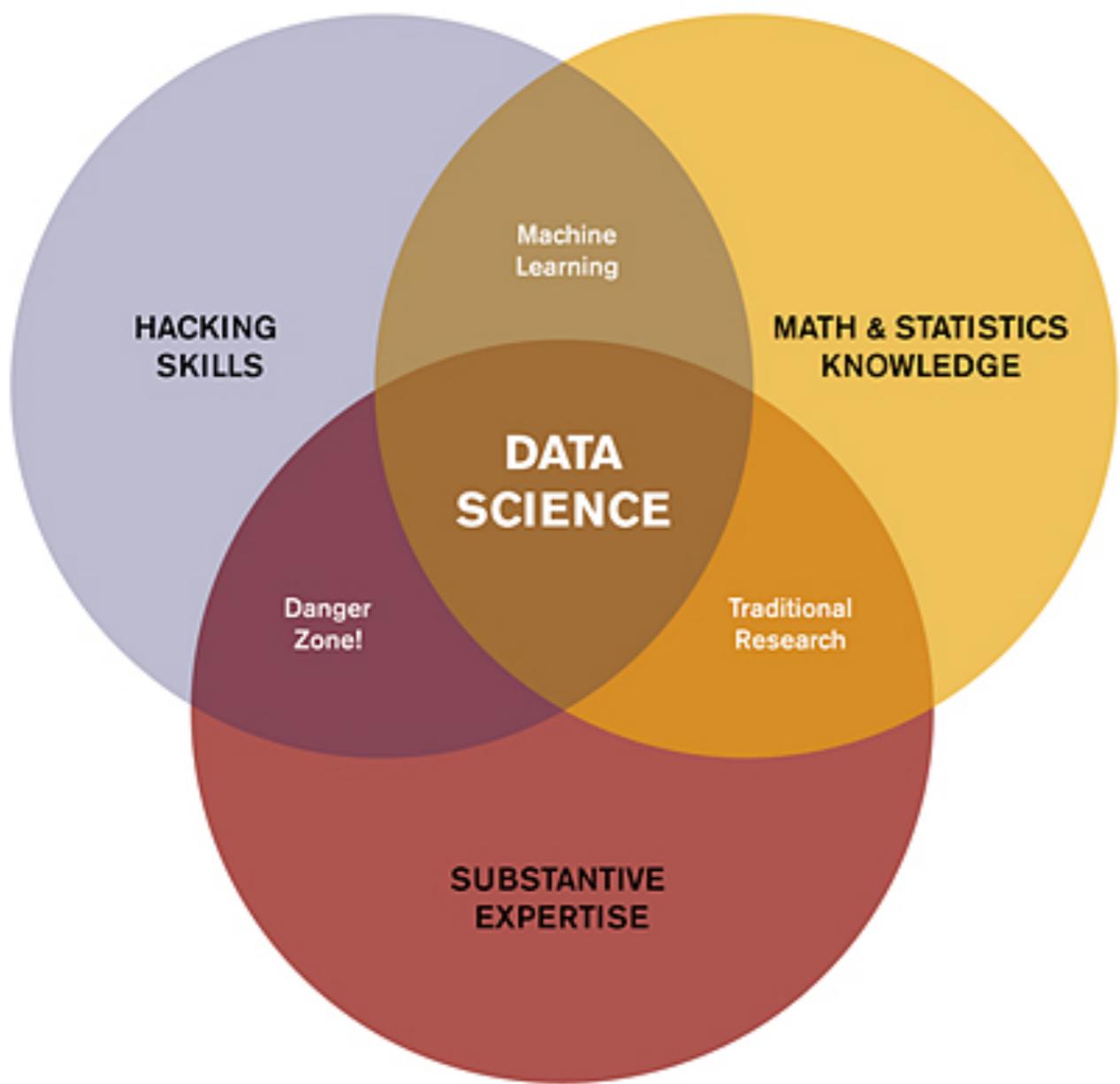


Performer of statistics on a Mac

What is a data scientist?



What is a data scientist?



Skill Domains

Statistics /
Machine Learning

Programming

Communication

Design

Not skills

Curiosity

Creativity



The Anatomy of a Data Science Project

Domain

Design

Data

Algorithms

Tools

Visualize
Communicate

Domain

Finding the relevant questions

The right metrics

Knowing what's been done



Design

Start with a question, not data

Iterative design process

Moving targets



Start with a question, not data

Iterative design process

Moving targets



Find Data

Clean Data

Manage Data



Find Data

Clean Data

Manage Data

BIG DATA

Machine Learning

Statistics

Applied Math



Open Source Tools

Python
Pandas, Scikit.learn
SQL, Mongo
Javascript, d3, Flask
Hadoop, Spark

Tools

Google



Easy to read graphs
Interactive dashboards
Explaining well, adapting to the audience



Easy to read graphs

Interactive dashboards

Explaining well, adapting to the audience



Ultimate Goal & Product: Insights

Domain

Design

Data

Algorithms

Tools

Visualize
Communicate

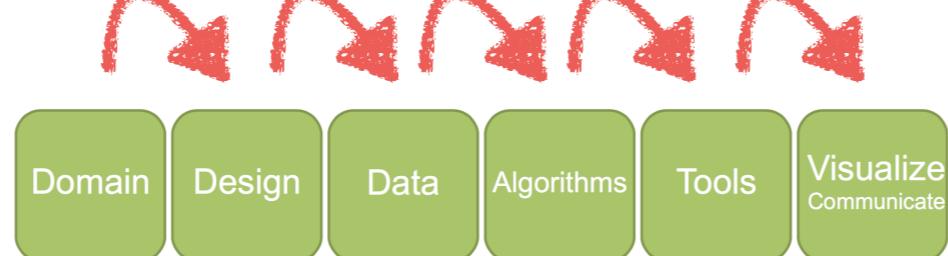
A Project-based course

Week 1



Repeat the
whole process
twice

Week 2



Learn by actually doing it



Active learning is super effective



Doesn't work without real effort

Format



9:30am - 12:00pm



1:00pm - 4:30pm

Follow the white rabbit.

Lessons, pair exercises,
challenges, **project work**

Zoom in on the Format



Focused time



Peer and community support



Self-learning with a safety net



Focused Time

Come to class every day

Work on assignments

Go for the best project outcomes you can

Be curious and creative



Community Support

Nobody knows everything

We don't know everything

Different experience levels in different areas

Learn by teaching: Help each other.

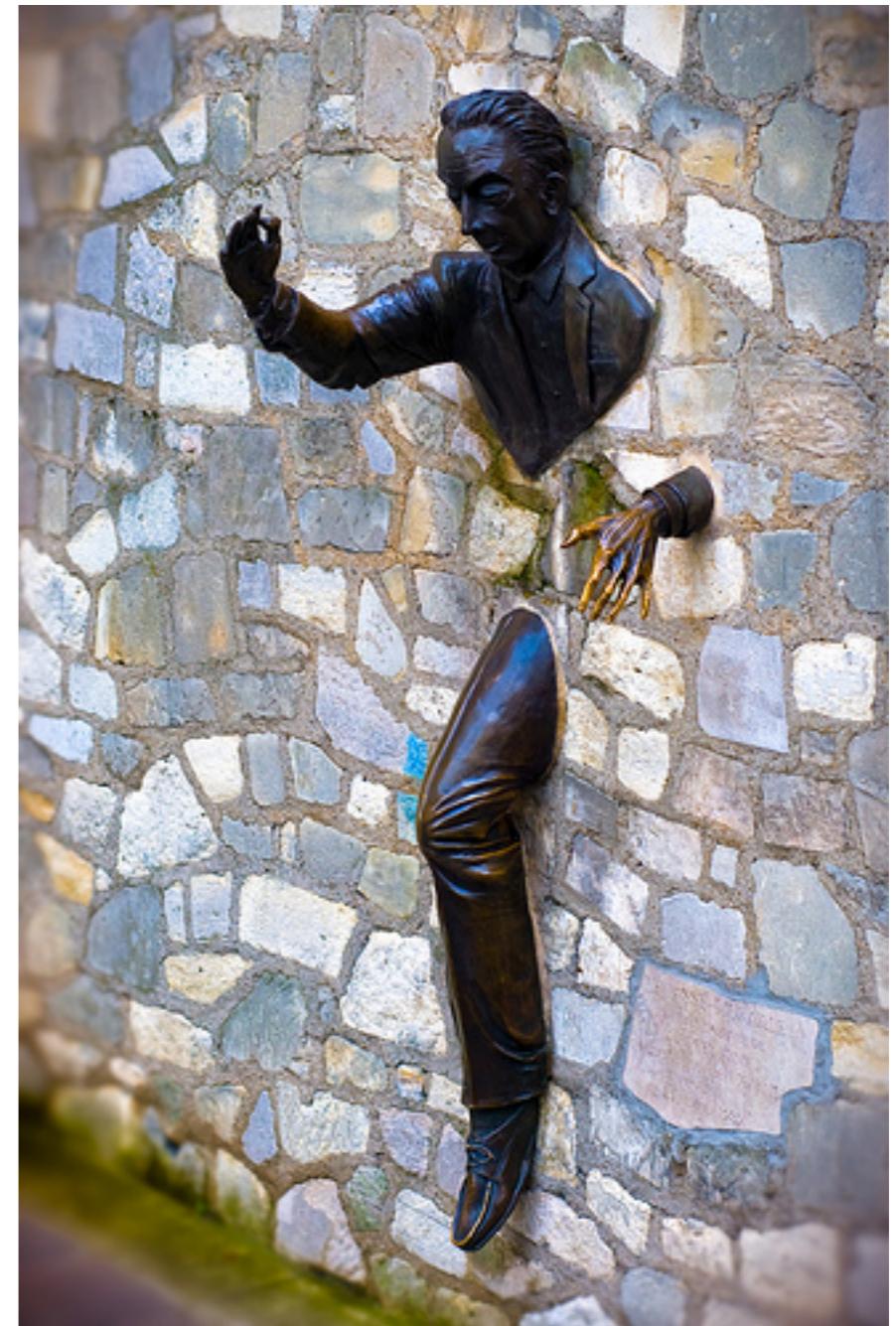


Self-learn with a safety net

**Nobody knows
everything**

Lessons/knowledge
important

The skill to walk through
when you hit walls is
much more important:
the hacker ethos.





Self-learn with a safety net

Lessons can't cover everything

Ability to quickly learn
is crucial

Best way to get it:
Build the foundation.
Keep getting stuck.
Practice & repetition.





Self-learn with a safety net

Get stuck. Ask peers. Ask
google. Learn. Proceed.

Safety net: Instructors
Ask us.

Agency:
Us → You



Three Pronged Attack



Lectures: Intuition & awareness



Challenges: Individual work



Projects: Team work

Lectures



Challenges



Projects

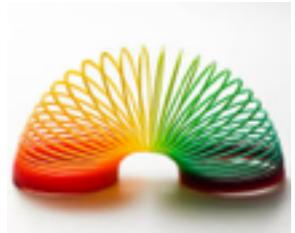


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[Subject to change]



Flexible curriculum—so it can adapt to you.



Please give feedback so we can adapt.

A group of five diverse people are standing together against a white background. From left to right: a man with dark hair and a mustache in a teal shirt; a woman with long blonde hair in a red plaid jacket over a grey top; a man with a beard in a blue t-shirt; a man with short dark hair in an orange button-down shirt; and a woman with long brown hair in a pink sweater.

You.

Who are you?

What do you do?

What are your
expectations?