Data Visualization

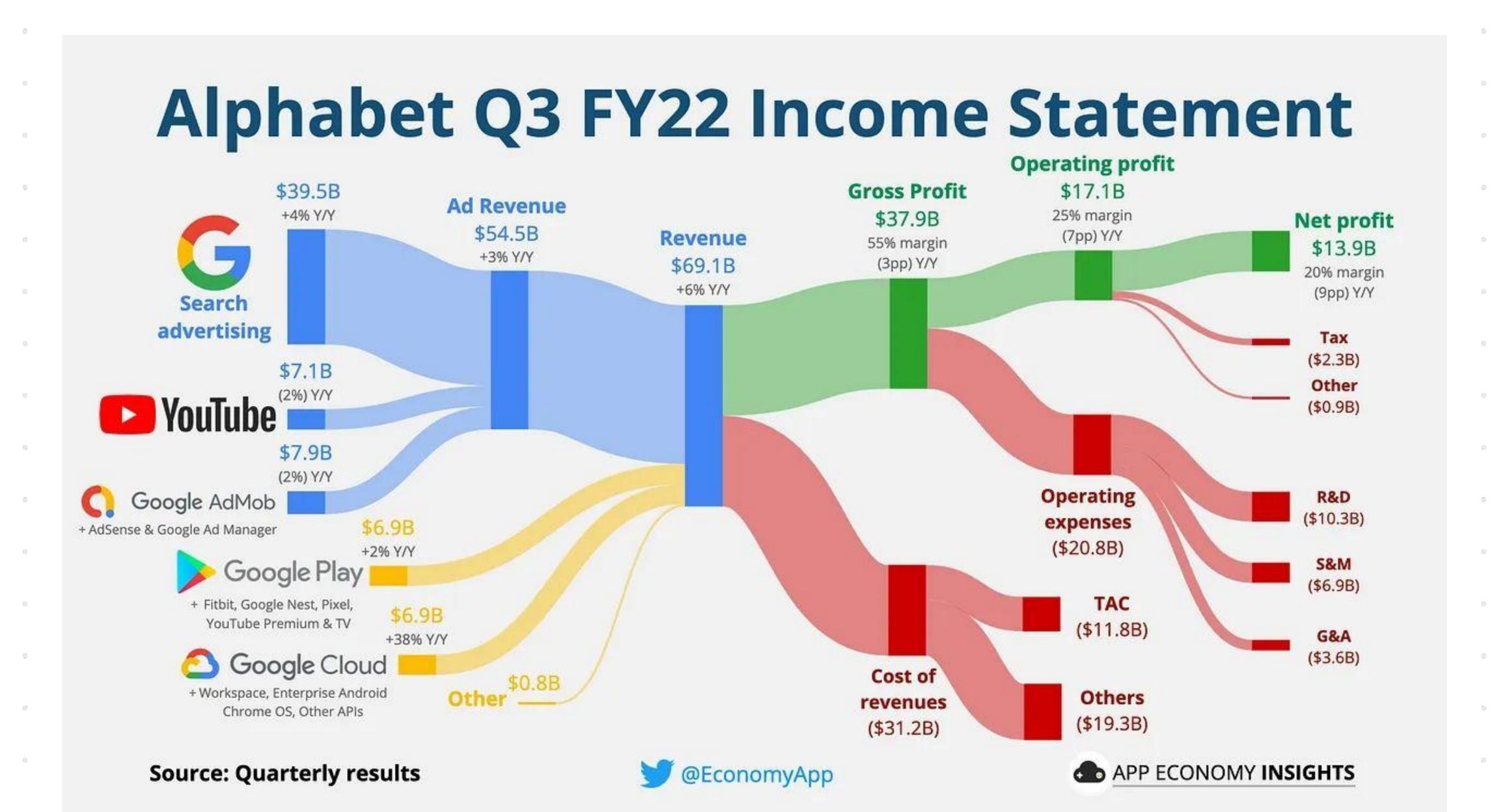
Agenda

- 1. Data Visualization Examples
- 2. Data Science Intro
- 3. Data Science Jobs
- 4. Analysts Jobs (Data vs Business vs BI)

- 5. Coursera Two Courses
- 6. Questions

Data Visualization Examples

Data Visualization Example 1: Sankey Diagram



Data Visualization Example 2: Dashboard



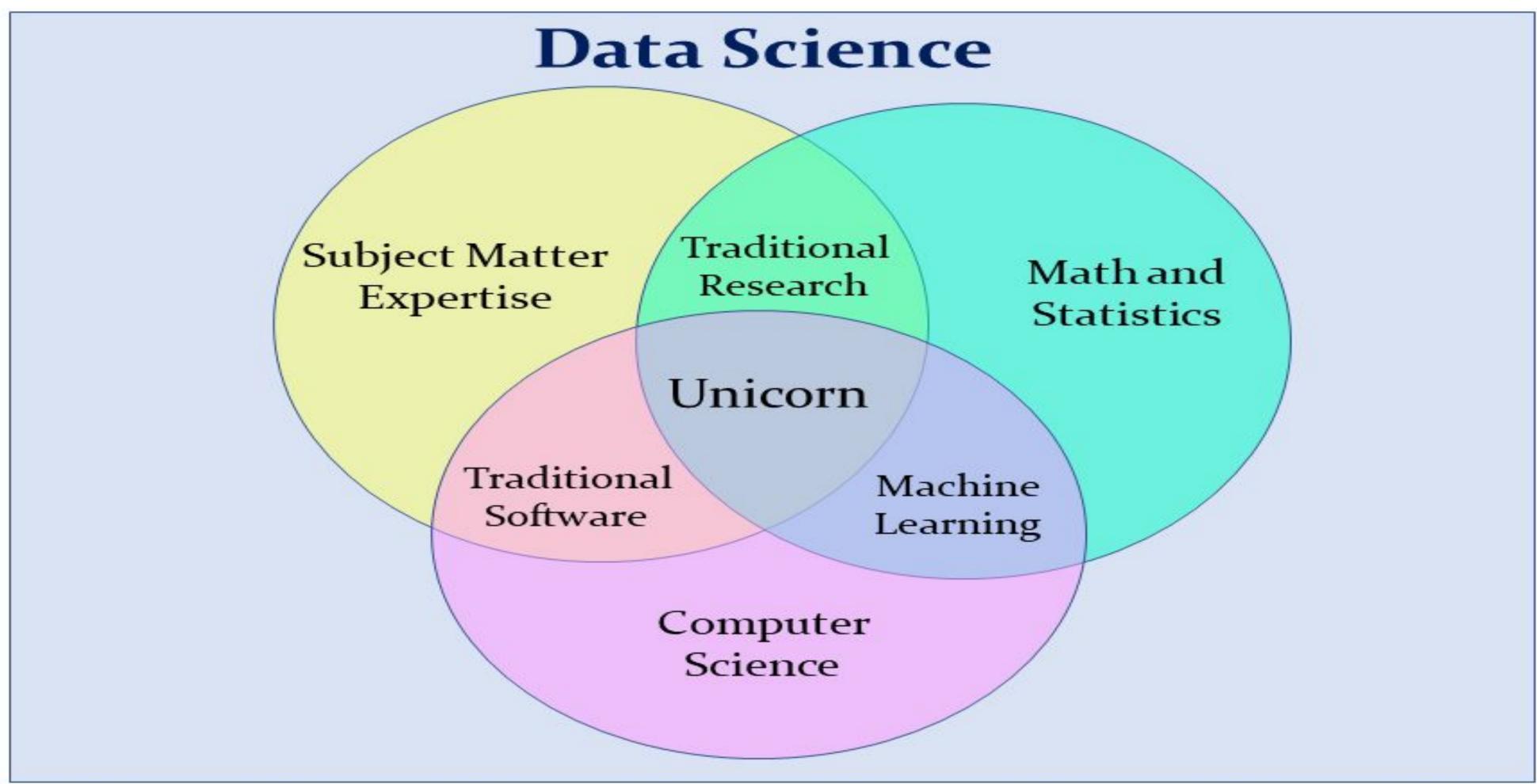
Data Science Intro

Data Science

- combines several disciplines including:
 - a. Math
 - b. statistics
 - c. computer science
- How to become a Unicorn in Data Science?



Data Science Venn Diagram 2.0



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365 DataScience Infographic (When & Why)

365 V DataScience



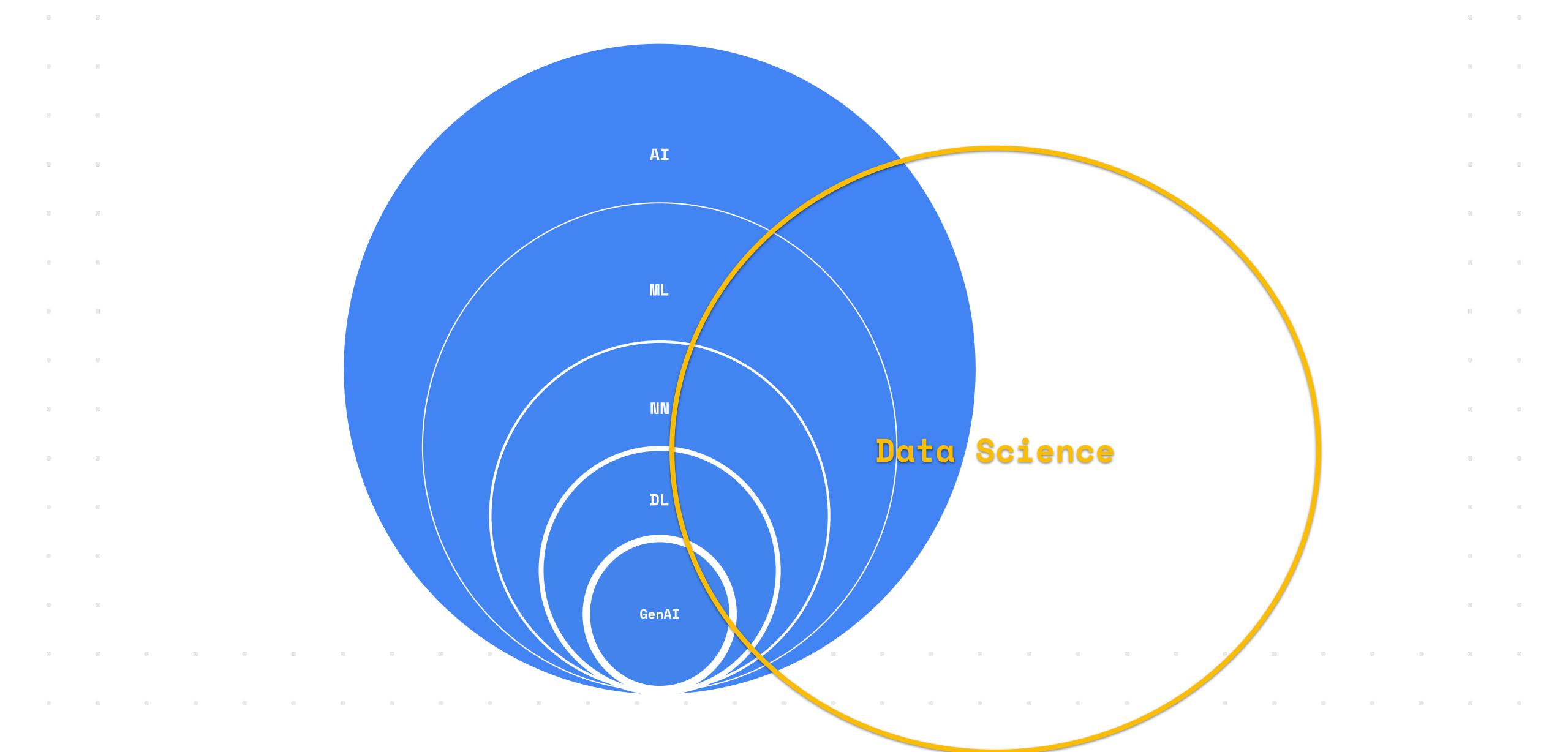
WHY you need it data-driven decisions require well-organized and relevant raw data stored in a digital format

use data to create reports and dashboards to gain business insights

Predictive Analytics

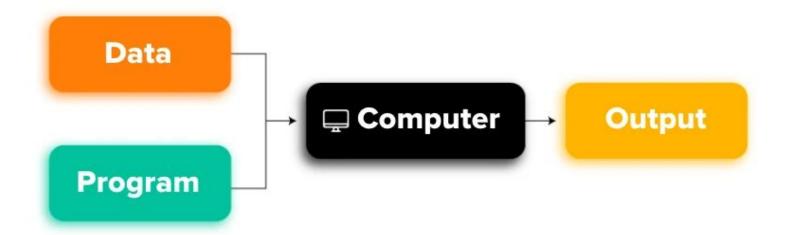
assess potential future scenarios by using advanced statistical methods utilize artificial intelligence to predict behavior in unprecedented ways

Data Science & AI from another Viewpoint

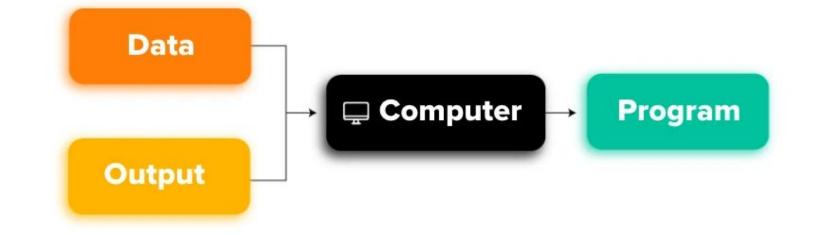


Data Science & AI/ML/DL

TRADITIONAL PROGRAMMING



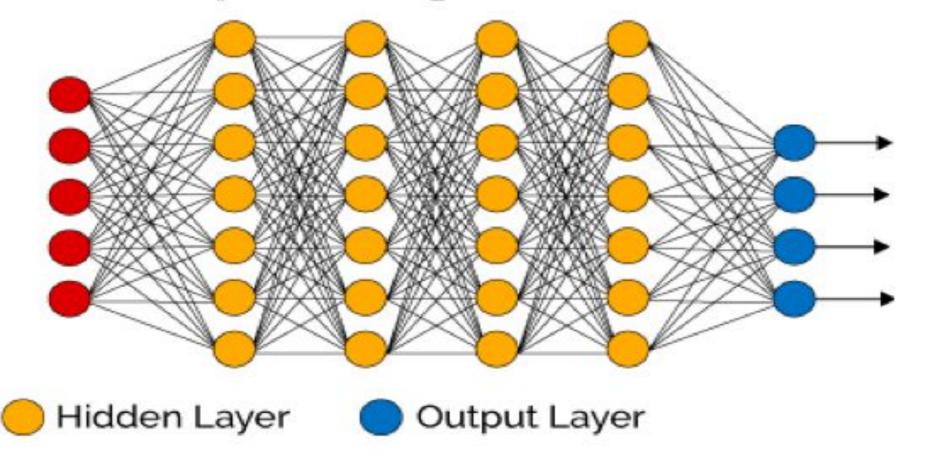
MACHINE LEARNING



Simple Neural Network

Input Layer

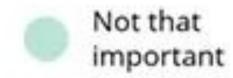
Deep Learning Neural Network



Data Science Jobs

Data Science Jobs: Long-lasting Career

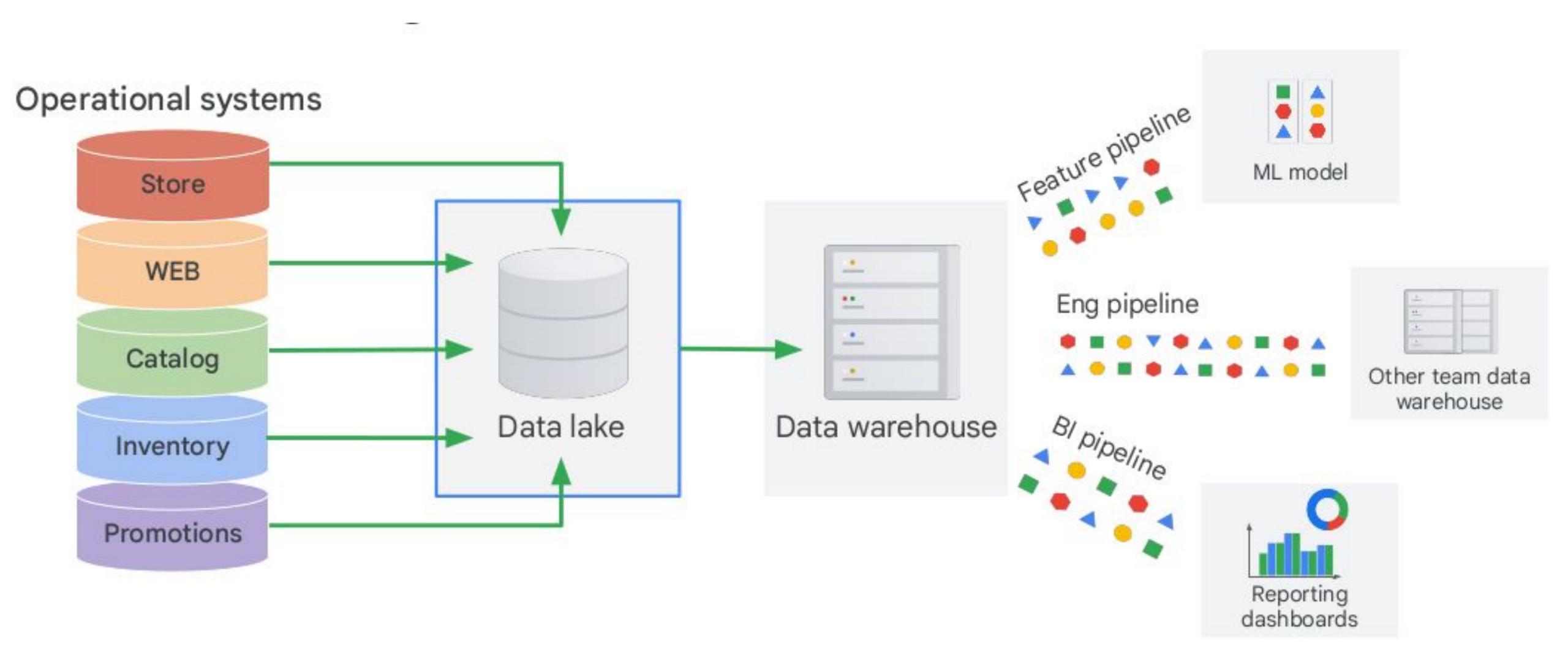
	Data Analyst	Machine Learning Engineer	Data	Data Scientist
Programming Tools				
Data Visualization and Communication				
Data Intuition				
Statistics				
Data Wrangling				
Machine Learning				
Software Engineering				
Multivariable Calculus and Linear Algebra				







Data Science Jobs: Where is the role of each?



Job Confusion



HR Manager offers a job title different from the actual job

Data Science Jobs: 1) Data Analyst

- Job might consist of tasks like:
 - pulling data out of SQL databases
 - becoming an Excel or Tableau master
 - producing basic Data Visualizations and Reporting Dashboards
 - On occasion:
 - analyze the results of an A/B Test
 - take the lead on company's Google Analytics account
- Some companies: Data Scientist is synonymous to Data Analyst

Data Science Jobs: 2) ML Engineer

• Some companies: data or data analysis platform is the product

- o so, Data Analysis or ML can be pretty intense
- o so, there is a need for someone who:
 - has a formal mathematics or statistics background
 - is hoping to continue down a more academic path

• ML Engineers

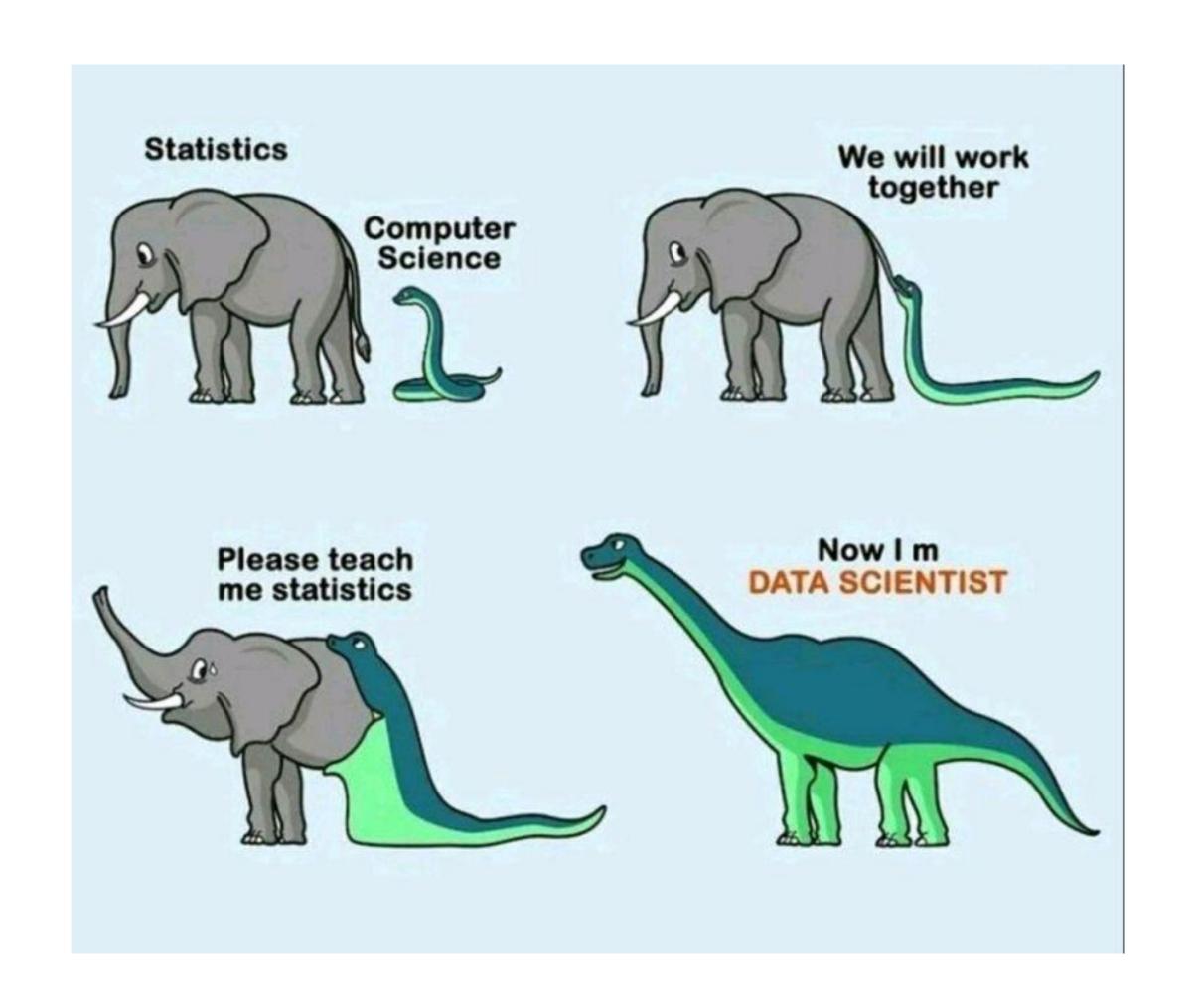
often focus more on producing great data-driven products

Data Science Jobs: 3) Data Engineer

- Some companies: have lot of traffic and large amount of data
 - so, there is a need for someone who:
 - set up lot of data infrastructure that the company will need
- Job postings listed under Data Scientist and Data Engineer

- strong software engineering skills are more important
- heavy statistics and ML expertise are less important

Data Science Jobs: 4) Data Scientist



Often used as a blanket title

to describe jobs that are drastically different

Data Science Jobs: 5) Data Generalist

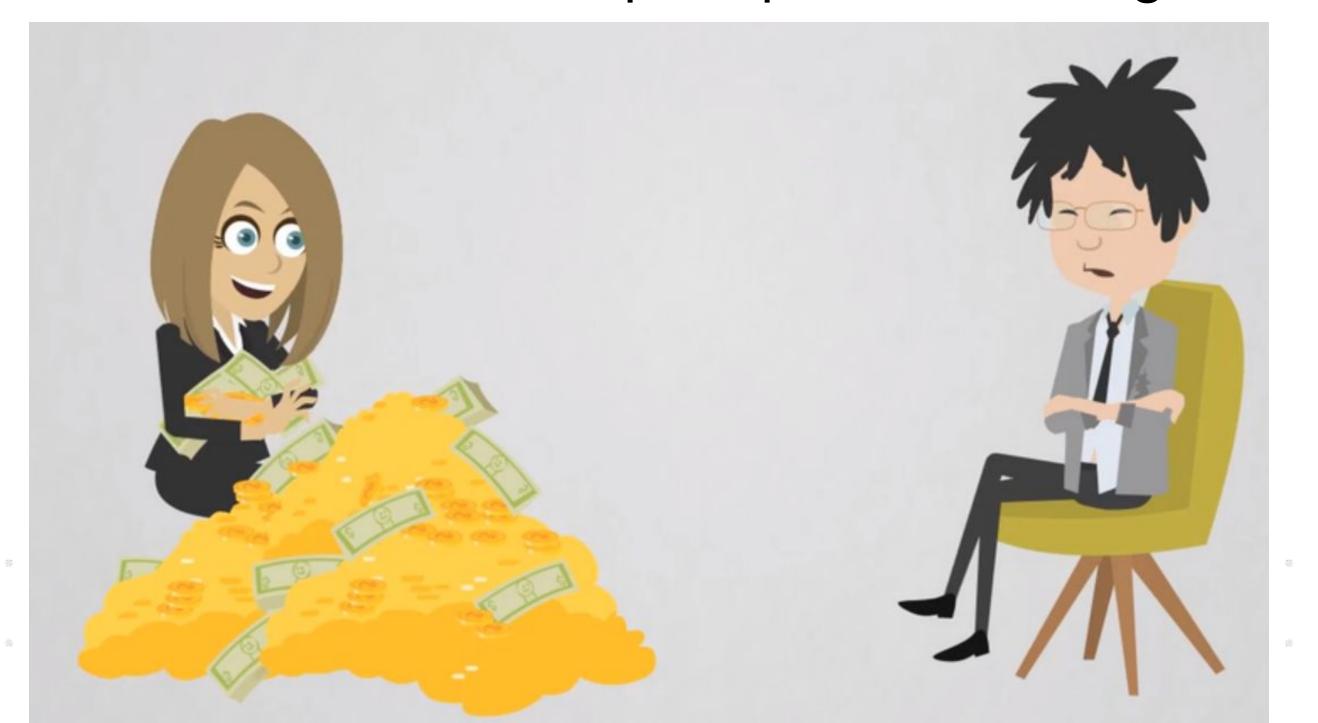
- Some companies: look 4 Generalist to join data scientists team
 - these companies cares about data but probably isn't a data company
- Data Generalist most important skills:
 - o familiarity with tools designed for Big Data
 - o experience with messy, real-life datasets

- Data Generalist can:
 - perform analysis
 - touch production code
 - Visualize Data

Data vs Business vs BI

Business Case Studies

- o are real-world experiences of how business people and companies succeed or fail
- examine events that have already happened
- We do not need a dataset to learn from business cases
- We could learn from them and attempt to prevent making a similar mistake in future



Business Case Studies: Example

Ryanair: cost-friendly budget airline that sells tickets so cheap

- travel to less busy airports
 - far from the city center
 - outside business hours
- o charges for almost every small addition
- o tries to keep planes for small times on airfields to save on rent
- operates only one type of aircraft to speed out ground crew processes

Business

Business Case Studies

Qualitative Analytics

Preliminary Data Report

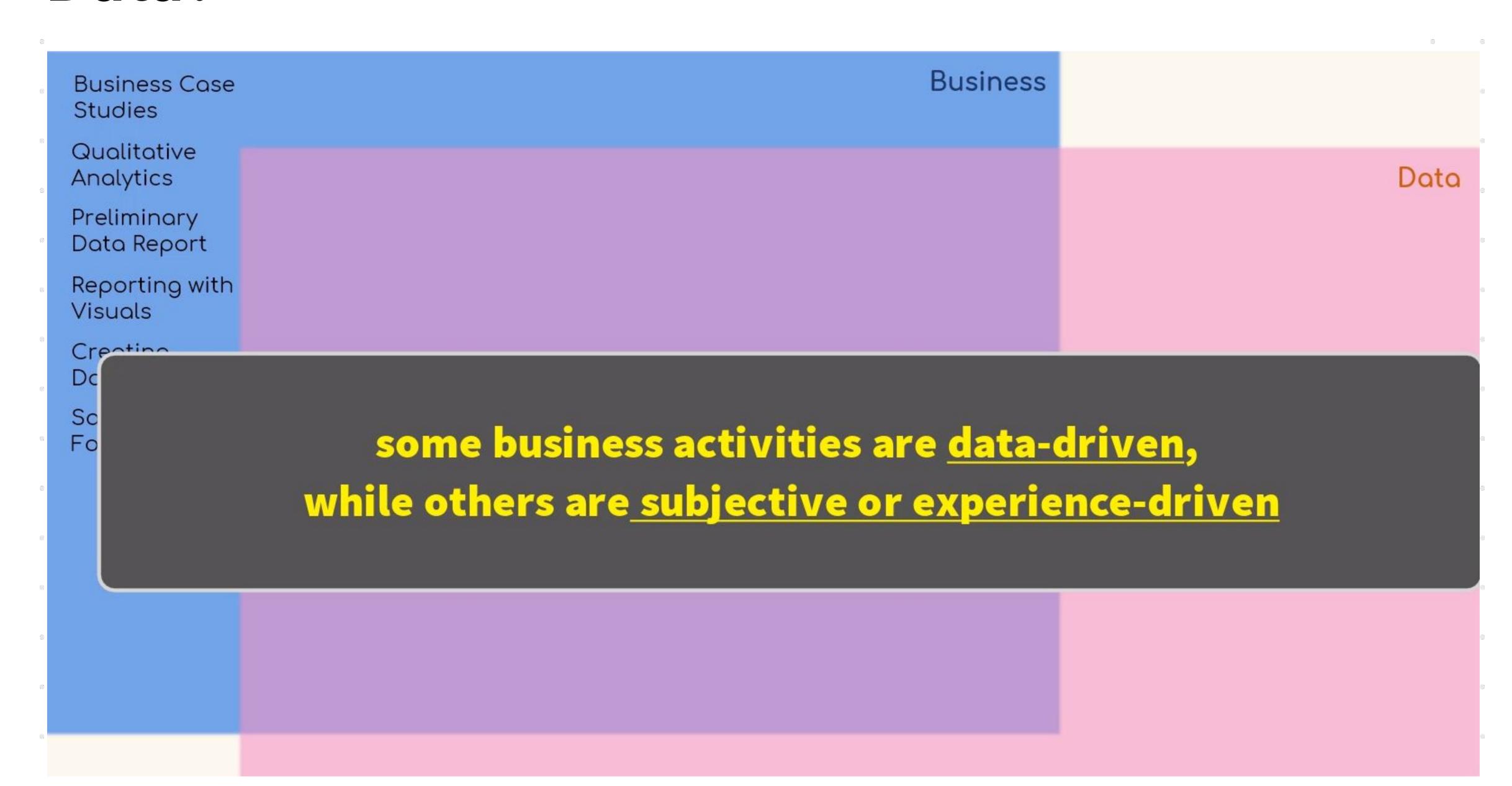
a Report

Reporting with Visuals

Creating Dashboards

Sales Forecasting Business

Data?



Data



Data Analysts vs Business Analysts vs BI Analysts

Data Analyst common tasks:

- Working with stakeholders to define a problem or business need
- Identifying and sourcing data
- Cleaning and preparing data for analysis
- Analyzing data for patterns and trends
- Visualizing data to make it easier to understand
- Presenting data in such a way that it tells a compelling story

Data Analysts vs Business Analysts vs BI Analysts

Business Analyst common tasks:

- Evaluating a company's current functions and IT structures
- Reviewing processes to identify areas for improvement
- Interviewing team members to identify areas for improvement
- Presenting recommendations/findings to management and other key stakeholders

- o Creating visuals and financial models to support business decisions
- Training and coaching staff in new systems

Data Analysts vs Business Analysts vs BI Analysts

BI Analyst:

Somewhat of a hybrid between Business Analyst and Data Analysts

- They use analysis, modeling, and visualization of:
 - 1. industry trends
 - 2. competitive landscape
 - to help businesses cut losses and increase profits

Coursera -Two Courses

Coursera Data Warehouse Course Link

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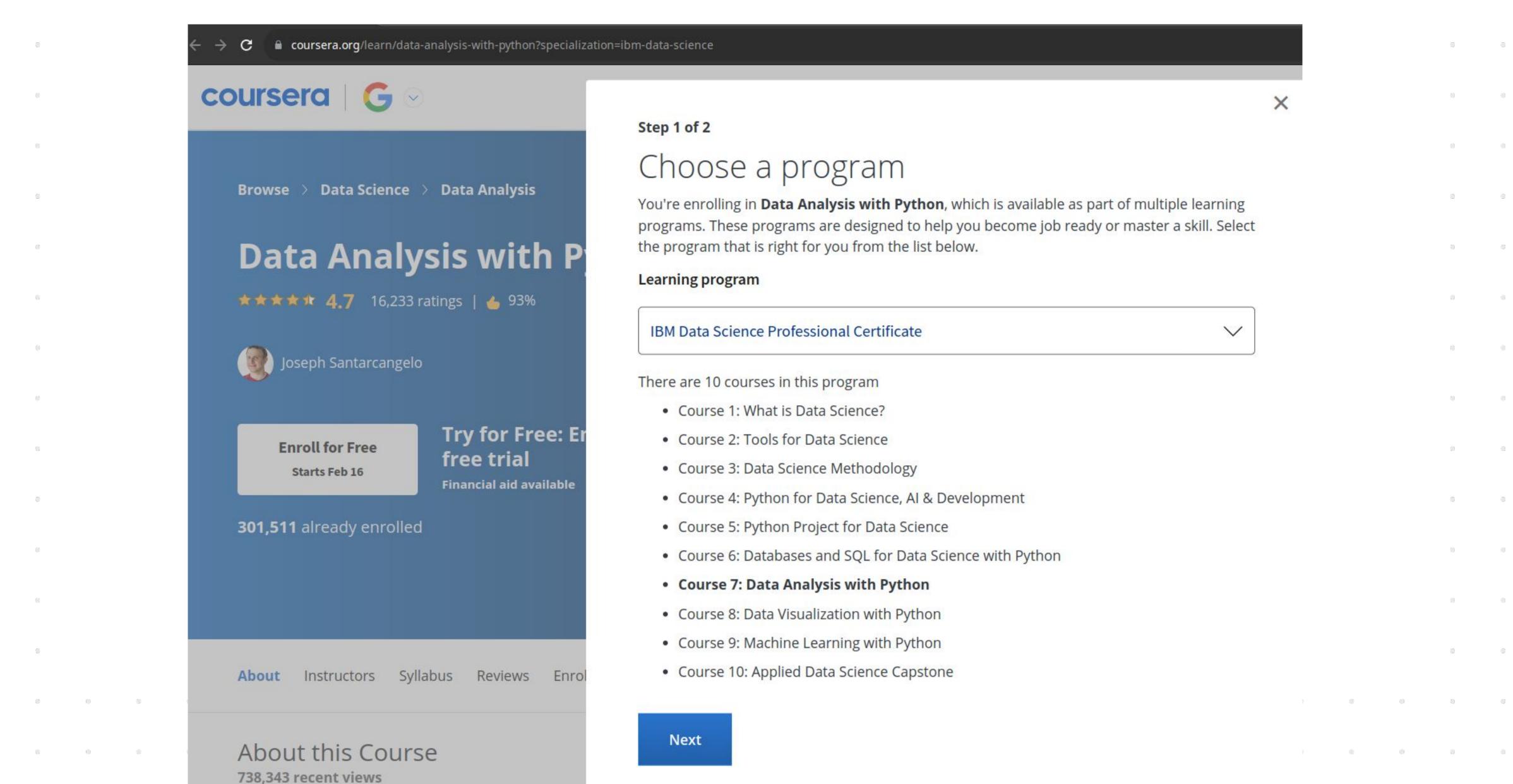


Part of the Bachelor of Applied Arts and Sciences

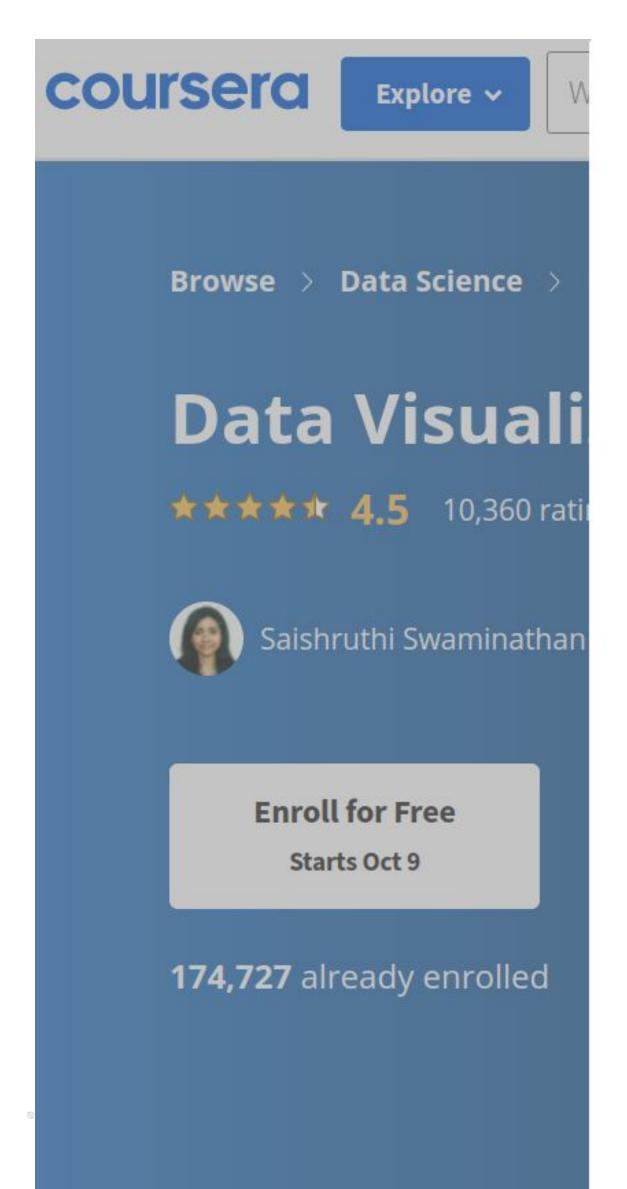
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301,511 already enrolled

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Enroll in Coursera Courses - 3



Step 2 of 2

7-day Free Trial

Data Visualization with Python is part of the larger IBM Data Science Professional Certificate. Your 7-day free trial includes:

- Unlimited access to all courses in the Certificate
 Watch lectures, try assignments, participate in discussion forums, and more.
- Cancel anytime.
 No penalties simply cancel before the trial ends if it's not right for you.
- \$39 USD per month to continue learning after trial ends.
 Go as fast as you can the faster you go, the more you save.
- Certificate when you complete.
 Share on your resume, LinkedIn, and CV.

Start Free Trial

Audit the course

Questions

Links

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