Data Science as Products

•••

Data science is more than technical wizardry.
It's about understanding the product.

I. Data Product Deep-Dive

What are data products? How are they used “in the wild”?

BREAKOUT Critically evaluate existing data products.

II. Data Product Design

BREAKOUT Design & present original product ideas.

I. Data Product Deep-Dive

A **product** is anything that can be offered to a market that might satisfy a want or need.

A **data product** incorporates data science into the operation of a product.

It's more than just analysis. Data products put **insights into production**, expanding the **utility** of the analysis.

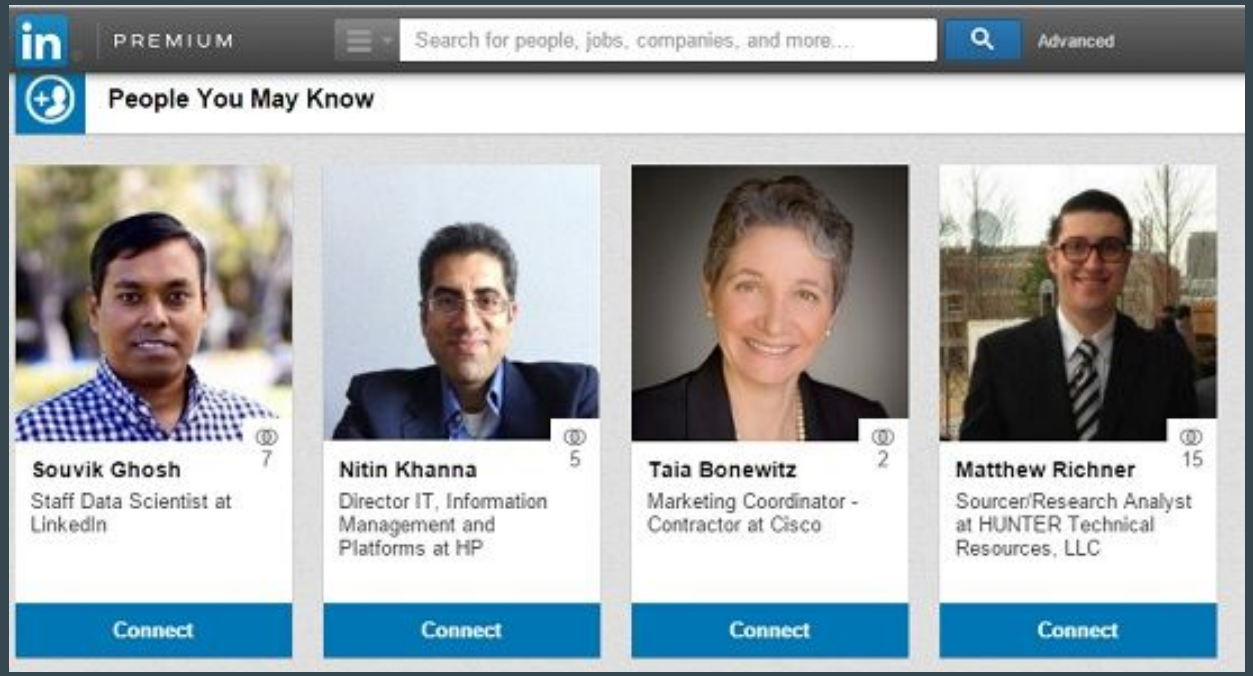
A CLASSIC EXAMPLE OF A DATA PRODUCT

A CLASSIC EXAMPLE OF A DATA PRODUCT

LinkedIn, ca. 2006

“It was like arriving at a conference reception and realizing you don’t know anyone. So you just stand in the corner sipping your drink - and you probably leave early.”

A CLASSIC EXAMPLE OF A DATA PRODUCT



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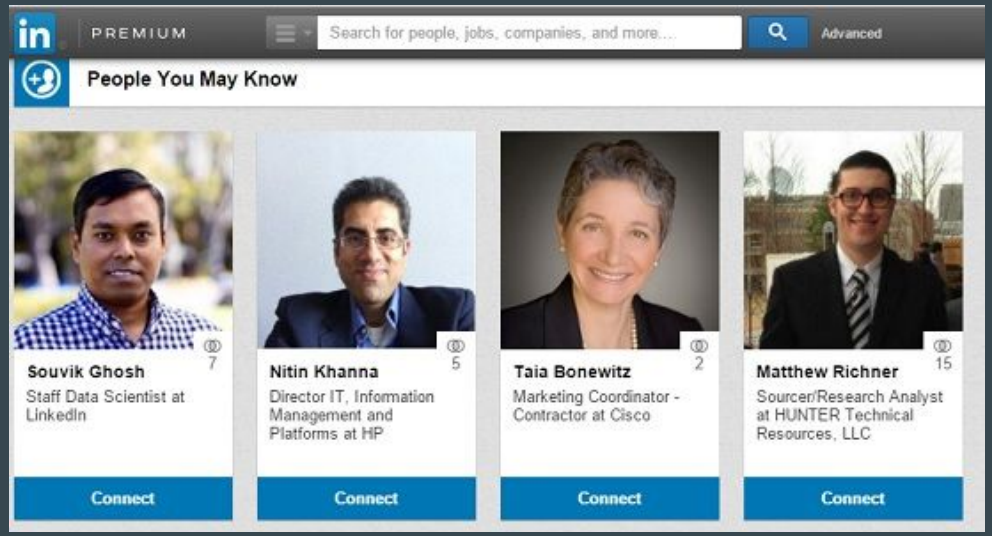


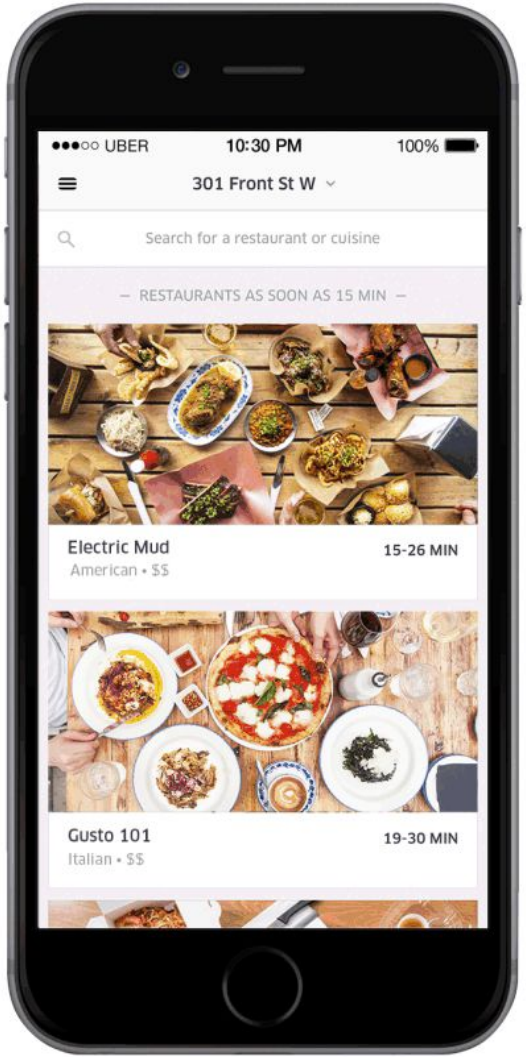
"People you may know" ads achieved a click-through rate 30% higher than the rate obtained by other prompts to visit more pages on the site. They generated millions of new pageviews. Thanks to this one feature, LinkedIn's growth trajectory shifted significantly upward."

Harvard Business Review 2012

Data products are valuable.

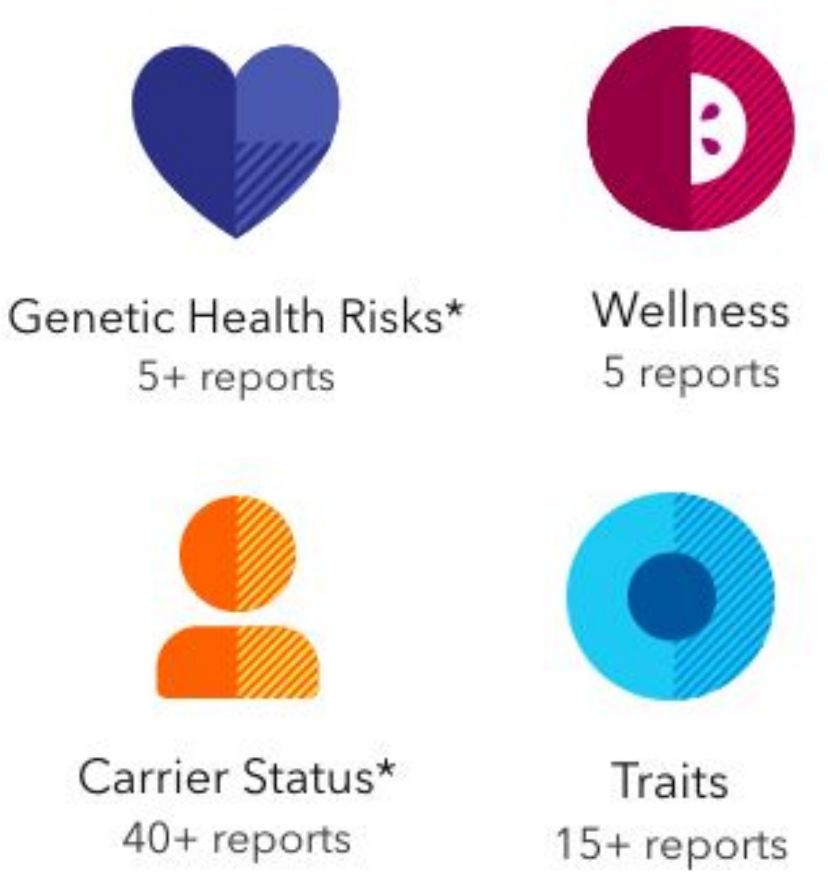
UberEATS

Prediction of estimated time of delivery (ETD) is a complex multi-stage data product.



23andMe

Genetic sequencing and association tests on the back end. Data viz on the front end.



What are some examples of data products that have contributed to the success of a business?

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II. Data Product Design

What makes a good data product?

WHAT MAKES A GOOD DATA PRODUCT?

Someone (other than me) wants or needs my product.

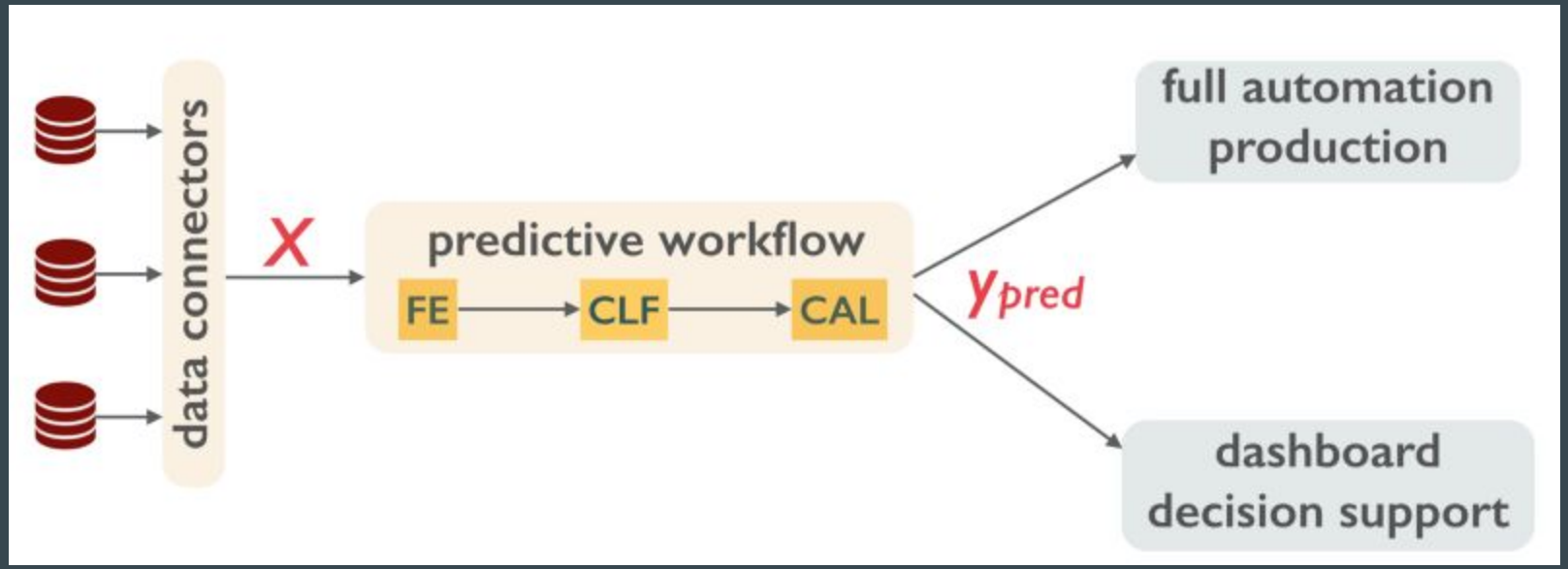
I can actually **access the data** needed to build it.

There is potential for the product to generate value for the company.

Think about a use case.

Think about usability.

Starting with the “y”



Balazs Kegl, Towards Data Science

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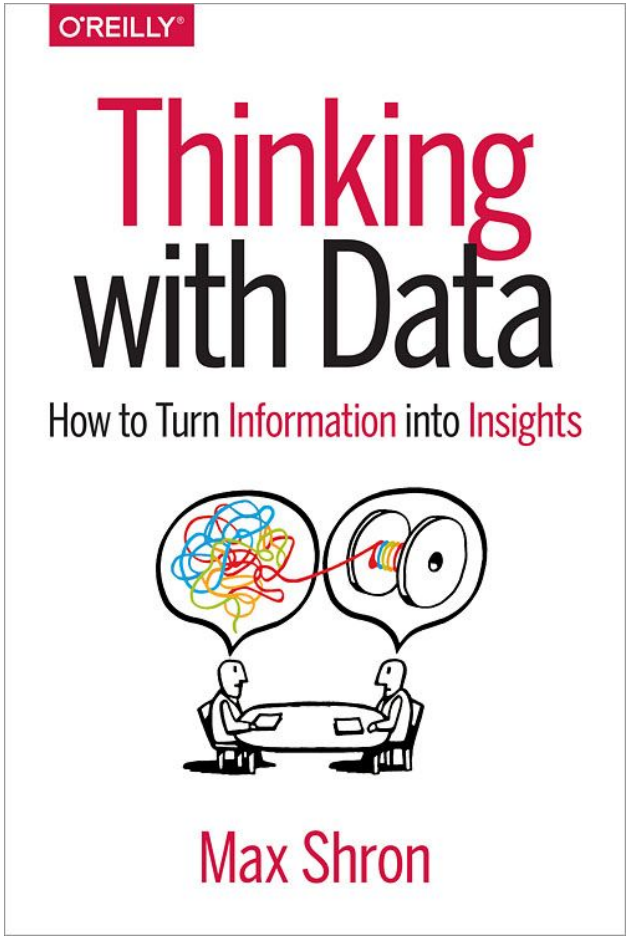
Need
Vision
Outcome



COntext
Need
Vision
Outcome

- Who are the people with an interest in the results of this project?
- What are they generally trying to achieve?
- What work, generally, is the project going to be furthering?

COntext

Need

Vision

Outcome

- What are the specific needs that could be fixed by intelligently using data?

These needs should be presented in terms that are meaningful to the organization. If our method will be to build a model, the need is not to build a model. The need is to solve the problem that having the model will solve.

COntext
Need
Vision
Outcome

The vision is a glimpse of what it will look like to meet the need with data.

It could consist of a mockup describing the intended results, or a sketch of the argument that we're going to make, or some particular questions that narrowly focus our aims.

COntext
Need
Vision
Outcome

We need to understand how the work will actually make it back to the rest of the organization and what will happen once it is there.

- How will it be used?
- How will it be integrated into the organization?
- Who will own its integration?
- Who will use it?
- In the end, how will its success be measured?

skimr

Clarence Cheng
Insight Data Science

http://skimr.herokuapp.com/

fluforecaster.herokuapp.com

cHarmony

Classify Clothes and Colors in a Click

Scott L. Morello
Data Science Fellow
Insight Data Science, Boston, MA

COntext
Need
Vision
Outcome

Breakout

- 1 hour
- Each group comes up with 3-5 data products
- Select one to present