The shift to data

Industry trends in finance

Virtual webinar best practices

- Find a quiet place, free of as many distractions as possible and use headphones if possible
- Stay on mute unless you are speaking
- Remove or silence alerts from cell phones, e-mail pop-ups, etc.
- Participate in activities and ask questions - this will be interactive!

DATA SOCIETY

Who we are

We provide customized, industry-tailored data science training and AI solutions — partnering with organizations to educate, equip, and empower their workforce with the skills to achieve their goals and expand their impact.

We deliver:

- High-quality data science training programs
- Customized executive workshops
- Custom software solutions and consulting services

Since 2014, we've worked with thousands of professionals to make their data work for them.

What you'll walk away with today

1. Examples of how data is used in finance
2. Trends of data usage in the finance industry
3. Steps that you can take to integrate data into your operations

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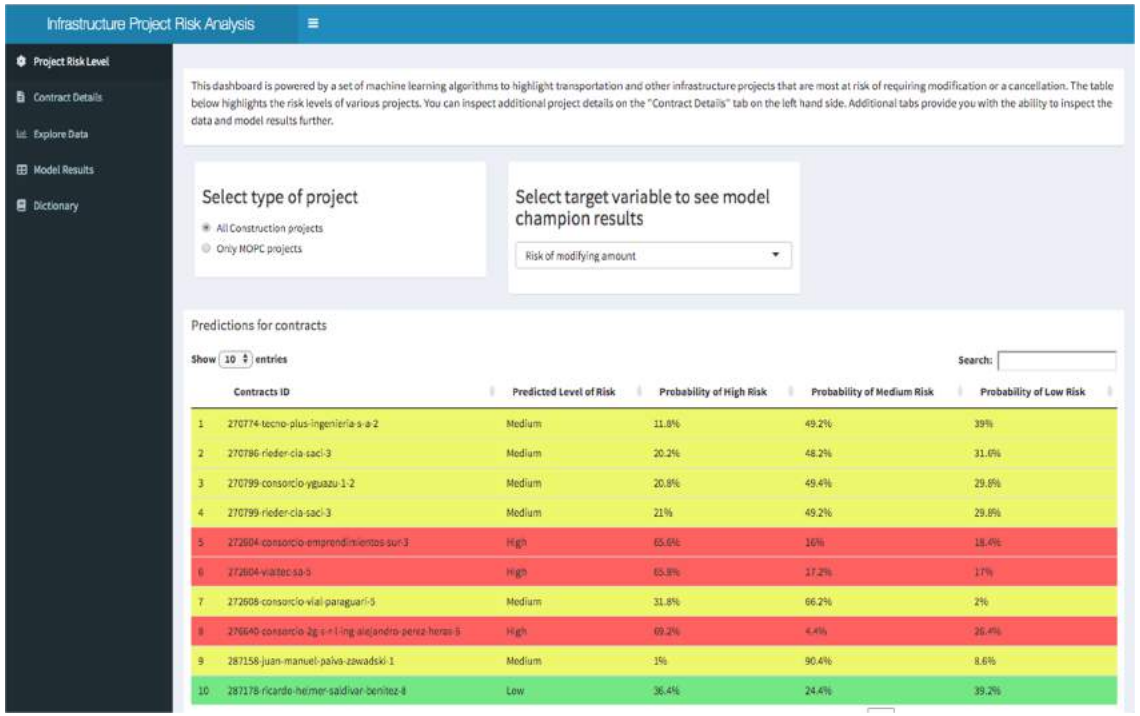
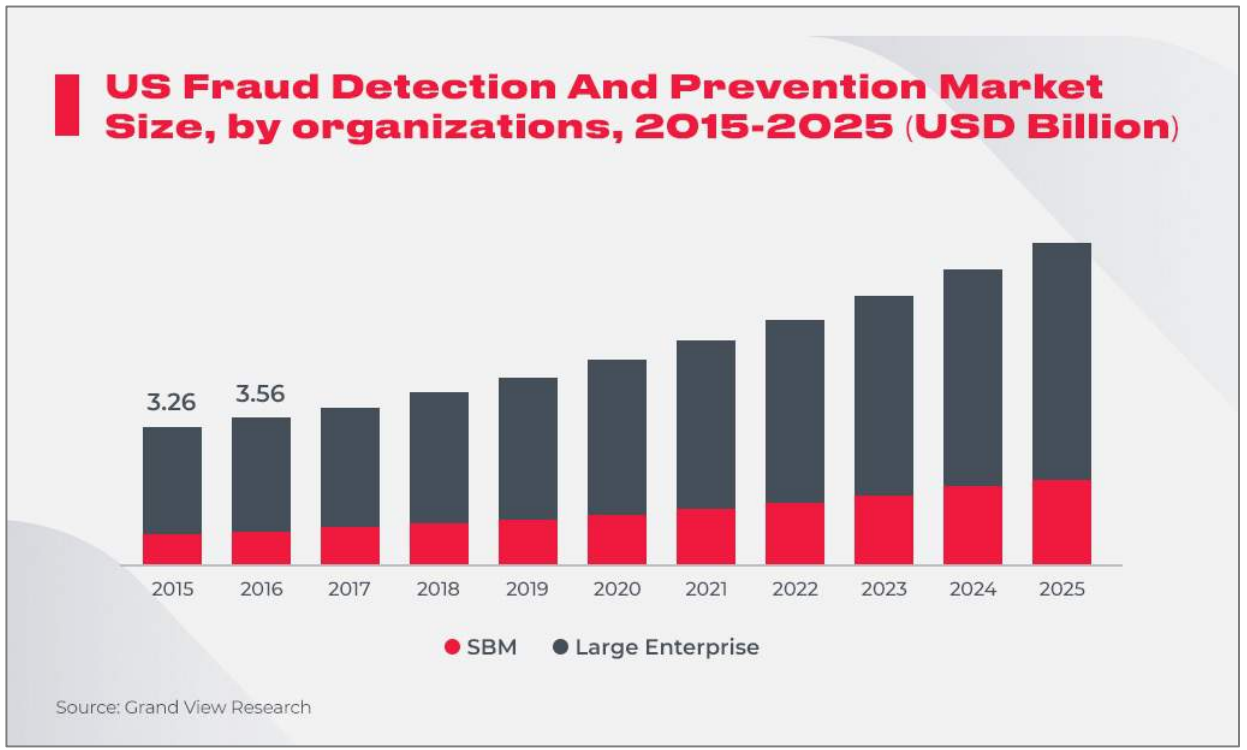
Case study: using NLP to measure risk

- The IDB needed a dashboard to automatically identify infrastructure projects they fund that might require a modification
- Scores risk using several dozen factors, weighted by Machine Learning algorithms
- The model provides detailed risk reporting, both query-based/searchable and dash-boarded



Leveraging data in finance

1. Risk analytics
2. Identifying consumer behaviors and trends
3. Operational risk mitigation
4. Fraud detection and identity validation
5. Payment and transaction processing



https://innovecs.com/blog/data-science-in-finance/

Key trends

- Enhanced trading & transaction technologies
  - Financial services was the leading sector for venture investment in 2021 with $134 billion invested, marking a whopping 177 percent year-over-year growth
- NFTs and crypto currencies
  - Alternative stores of value are increasing diversification and trading options

The Economist

Key trends

- Skills required of professionals are evolving
  - In 2021, the largest uptick in technical skill demand is for programming in R and Python (up by 33 per cent) and the process development framework Scrum (up by 2.6 per cent) - according to Robert Half, a recruiting firm
  - The talent to fill this demand is in short supply, which is pushing employers to increase salary offers for skilled professionals by 10 to 20 per cent
  - Skills requirements include:
    - Knowledge of databases is increasingly important
    - Knowledge of data structures and processes is important
    - Understanding of how to find patterns, and detect statistical significance
- A growing array of tools available for leveraging AI and machine learning in finance
  - Over 160 R packages for financial use cases
  - https://cran.r-project.org/web/views/Finance.html

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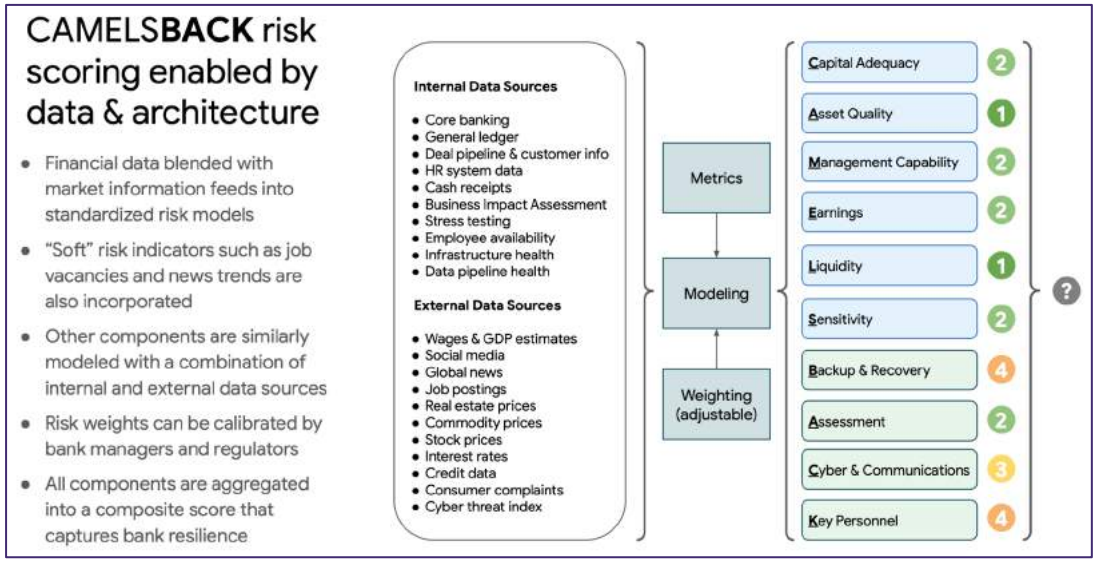
Case study: combining disparate data sources

- Enhanced risk models that utilize non-traditional data sources
- FDIC Tech Sprints: https://www.fdic.gov/fditech/techsprints.html



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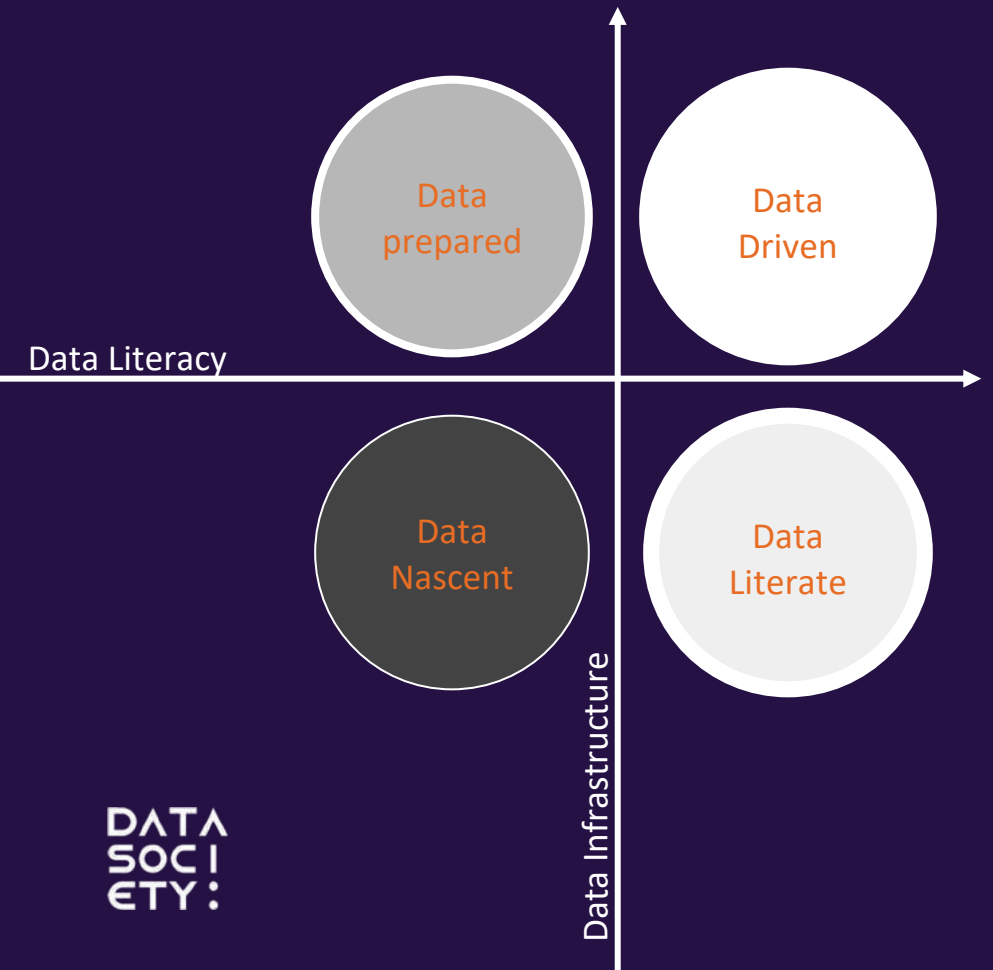
Discussion

What kinds of data are you using today?

Ask yourself: where do you sit?



- A data-driven culture incorporates data and analysis into its policy decisions, systems, and processes
- It can be separated into two main categories:
  - Data infrastructure
  - Data literacy

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Data Infrastructure

Data Collection
Is data collected in a timely and clean way?

Data Storage
Is the data stored securely with a backup?

Data Access
Can staff access data easily and in a timely manner

Data Literacy

Data Leadership
Do executives champion data utilization?

Data Governance
Are staff aware of data standards and practices?

Data Knowledge
Does staff understand how to ask questions of data?

How can you start with data analytics?

Ask

Make it specific and measurable

Inventory

Find the information that you have access to

Collaborate

Talk to your data team about how they can help

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How can you support data literacy?

1. Bring in external / internal experts for “lunch and learns”

1. Attend and send team members / colleagues to data conferences

1. Set up training opportunities based on identified skills gaps

1. Plan an event, such as a data competition

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Discussion

What question do you want to explore with data analytics?

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Predicting pregnancy: ethical considerations

How Companies Learn Your Secrets

By CHARLES DUHIGG FEB. 16, 2012

Antonio Bolfo/Reportage for The New York Times

http://www.nytimes.com/2012/02/19/magazine/shopping-habits.html?_r=0

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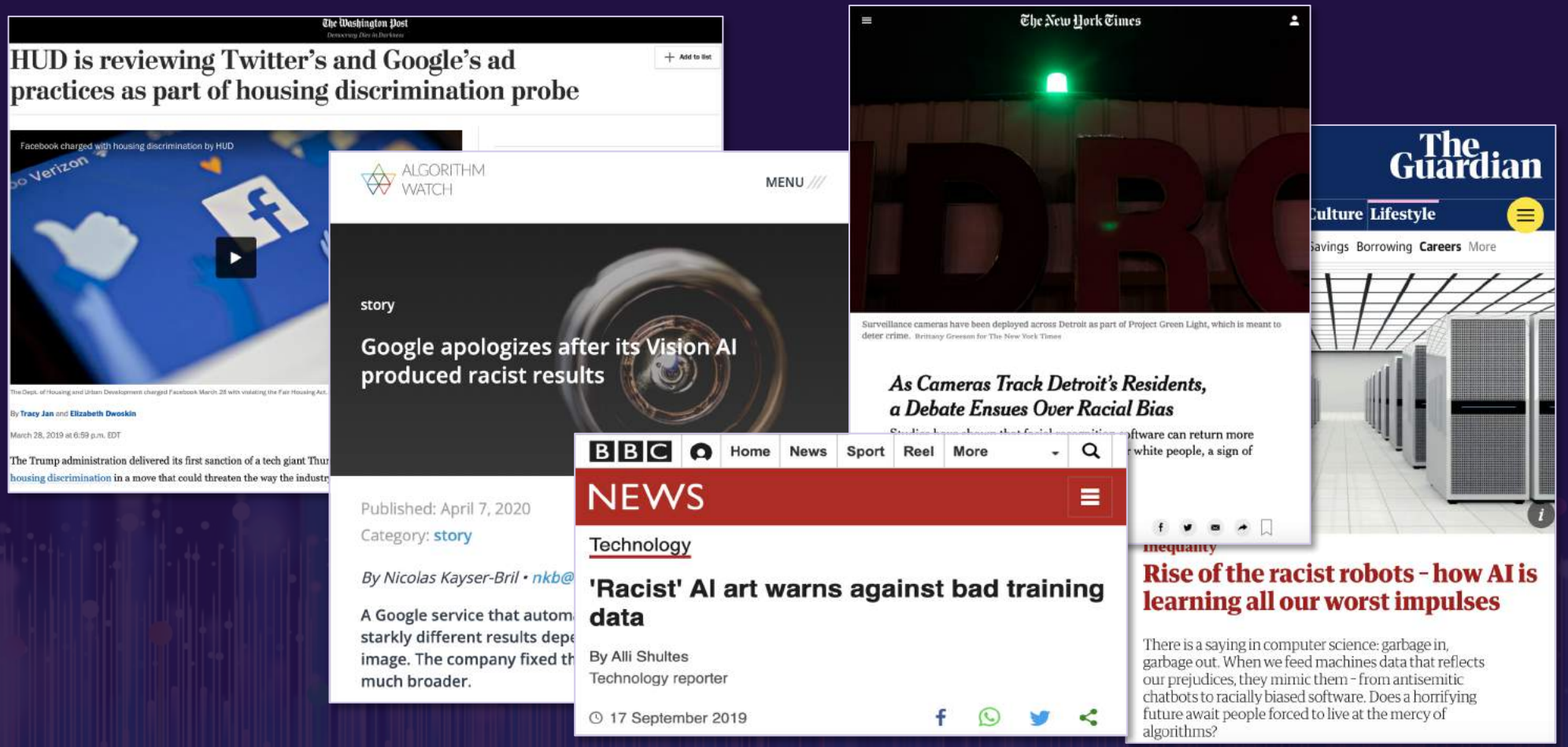
How can we mitigate these risks?



Case study: beyond infrastructure

- Discover Financial Services (DFS) needed to onboard new employees so they could effectively navigate the company's systems and data tools
- 40-hour data science training program for employees using R, SQL, and Snowflake, aimed at upskilling employees and working to fulfill the data-centered vision
- By implementing this program to improve data literacy, their new hires were able to increase the impact of Discover's revamped infrastructure

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https://datasociety.com/case-study/discover-financial-services/

Discussion

What is one step you will implement to become more data-driven?

Accelerate your innovation today

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