



SILICON VALLEY
DATA SCIENCE

WHAT IS YOUR DATA WORTH?

John Akred

@BigDataAnalysis

COME SEE US & SAY HELLO!


Tuesday, 23 May

- **Data 101: The Business Case for Deep Learning, Spark, and Friends** with Sanjay Mathur
- **Architecting a Data Platform** with John Akred & Stephen O'Sullivan
- **Developing a Modern Enterprise Data Strategy** with John Akred & Scott Kurth

Thursday, 25 May

- **Ask Me Anything** with John Akred, Scott Kurth & Stephen O'Sullivan
- **What's Your Data Worth?** with John Akred





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Silicon Valley Data Science is transforming
business through data science and
engineering.



The background of the image consists of several tall stacks of silver coins, likely Euro coins, arranged in a row. The lighting is dramatic, with strong highlights and deep shadows, creating a sense of depth and texture. A semi-transparent dark blue rectangular overlay is positioned on the right side of the image, partially covering the stacks of coins.

DATA MONETIZATION DREAMS

How much is my data worth?

Forbes / Tech

JUL 7, 2014 @ 5:00 AM 50,292 VIEWS

Why Google's Waze Is Trading User Data With Local Governments

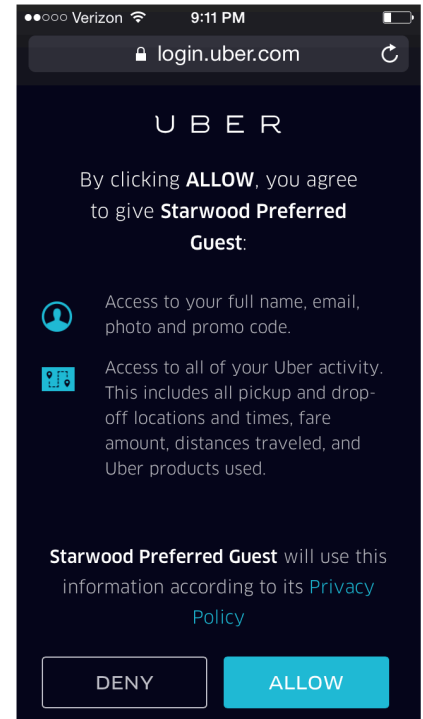
Mastercard, AmEx Quietly Feed Data to Advertisers

Privacy Concerns Prevent Some Targeting Options

Forbes / Business

JAN 6, 2015 @ 6:58 AM 83,320 VIEWS

Surprise! With \$60 Million Genentech Deal, 23andMe Has A Business Plan



How much is my data worth?

Ruling Allows Banks to Sue Target Over 2013 Data Breach

By REUTERS SEPT. 15, 2015

TECHNOLOGY

Ashley Madison Chief Steps Down After Data Breach

By NICOLE PERLROTH AUG. 28, 2015

Hackers Took Fingerprints of 5.6 Million U.S. Workers, Government Says

By DAVID E. SANGER SEPT. 23, 2015

**BURGLAR
ALARM**

O. B. MCCLINTOCK CO.

MINNEAPOLIS, MINN.



WHAT DOES A BREACH COST?

Average: \$154 per record

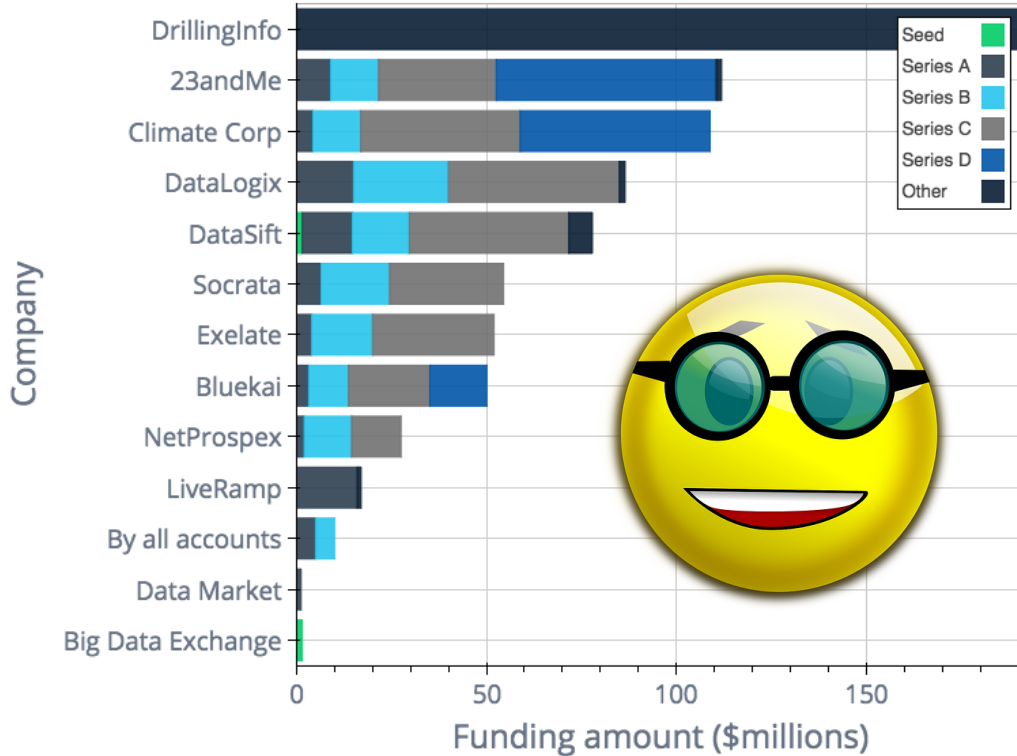
- \$363 healthcare
- \$300 education
- \$165 retail
- \$121 transportation
- \$68 public sector

source: <https://securityintelligence.com/cost-of-a-data-breach-2015/>



*Lots of money is going into companies that buy and sell data,
but very little work on this question has been done.*





Bought by Monsanto \$930 million
 Bought by Oracle \$1.2 billion

Bought by Nielsen \$200 million
 Bought by Oracle \$400 million
 Bought by D&B \$125 million
 Bought by Acxiom \$310 million
 Bought by Morningstar \$28 million
 Bought by Qlik \$13.5 million



Machine learning data management startup SafeGraph raises \$16M



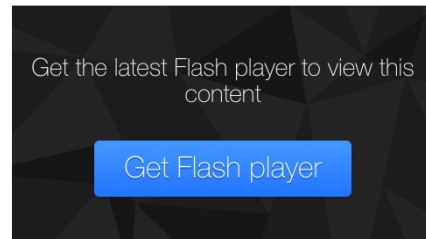
BY **DUNCAN RILEY**

UPDATED 02:25 EST . 21 APRIL 2017



San Francisco-based machine learning data management startup [SafeGraph Inc.](#) has raised a \$16 million funding round led by IDG Ventures USA that included more than 100 high-profile individual investors.

Among the investors in the unusual Series A round are Peter Thiel, Adam D'Angelo, Romesh Wadhvani, Eric Cantor, KT zu Guttenberg, Prince Turki Al Saud, Jack Dangermond, Barry Sternlicht, Pete Briger, Naval Ravikant and Nicolas Berggruen.



CUBE NEWS

SEE MORE

Wait, what? An Internet of Things app is infrastructure?

The new kingmakers of IT: maximizing DevOps for enterprise



INFORMATION GOODS

Information does not adhere to three main features of the traditional market system:

1. *Excludability*
2. *Rivalry*
3. *Transparency*

DeLong and Froomkin, 2000; Varian, 1995; Varian, 1999; Dou and Wu, 2015



A vertical stack of several coins, likely US quarters, shown in a close-up, black and white photograph. The coins are stacked on top of each other, with the edges of the coins visible. The lighting creates highlights and shadows, emphasizing the texture and ridges of the coins.

INTANGIBLE ASSET VALUATION

Intangible assets: non-physical assets with commercial value but not in a form eligible for traditional IP law protection.

Three main models:

1. *Cost-based*
2. *Market-based*
3. *Income-based*

Matsuura, 2004



THE DATA VALUE CHAIN

DRAW VALUE FROM YOUR STRATEGIC DATA ASSETS

Discover



RAW

Ingest



PROCESSED

Process



Persist



INTEGRATED

Integrate



Analyze



ACTIONABLE

Expose



How much is my data worth to others?



THE DATA VALUE CHAIN

Can others value from my data, and will they pay?

Discover



RAW

Ingest



PROCESSED

Process



Persist



INTEGRATED

Integrate



Analyze



ACTIONABLE

Expose



- What level of (pre)processing maximize the external opportunity?
- What is the cost of exposing the data externally?
- Are there any liability or brand concerns with this data? (HIPPA, PCI)
- Are there easy or cheaper substitutes?



WHAT MARKET?



How much is third-party data worth to me?



THE DATA VALUE CHAIN

Can others value from my data, and can we pay?

Discover



RAW

Ingest



PROCESSED

Process



Persist



INTEGRATED

Integrate



Analyze



ACTIONABLE

Expose



- What level of (pre)processing maximize the *internal* opportunity?
- What is the cost of acquiring the data and exposing *internally*?
- Are there any liability or brand concerns with this data? (HIPPA, PCI)
- Are there easy or cheaper substitutes?



EXTERNAL DATA'S VALUE TO YOU

- **A/B testing**
- **Value of information (VOI) framework**

VOI = Expected value of decision using data
- Expected value of decision without data



What is my data worth within the organization?



THE DATA VALUE CHAIN

Can others value from my data, and will they *help* pay?

Discover



RAW

Ingest



PROCESSED

Process



Persist



INTEGRATED

Integrate



Analyze



ACTIONABLE

Expose



- What level of (pre)processing maximize the *internal* opportunity?
- What is the cost of acquiring the data and exposing *internally*?
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- Are there easy or cheaper substitutes?



ASSESSING CURRENT DATA VALUE

- **Mutual information (MI)**

MI = Information entropy without added data
- Information entropy with added data

- **Take inventory**



INCREASING DATA'S VALUE IN YOUR ORGANIZATION

- ❖ Accessibility
- ❖ Integration
- ❖ Ease of use
- ❖ Coverage
- ❖ Completeness
- ❖ Accuracy
- ❖ Latency




WHAT CAN WE SAY ABOUT DATA AND VALUE?

A black and white photograph of a scale with a wet apple on it, symbolizing the weighing of data and value. The apple is covered in water droplets and sits in the left pan of the scale. The dial of the scale is visible in the foreground, showing markings for kilograms and grams.

- Unique properties of data make it difficult to value
- The value of your data to others depends on explanatory power and uniqueness
- Make data valuable internally by making it easy to find and use





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SILICON VALLEY
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Yes, we're hiring!
info@svds.com

THANK YOU

John Akred
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