



# Definitions

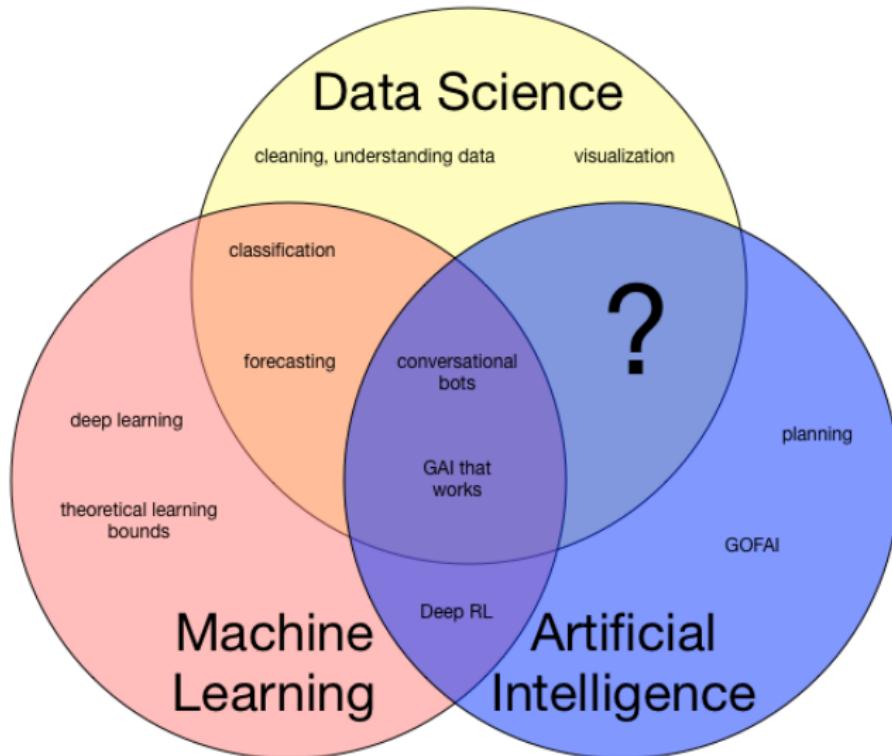
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## Roadmap

- What is data science / artificial intelligence / machine learning?
- What is possible with these new tools and techniques?
- What are the challenges?



Data are everywhere.

## User ratings

<a href="#"><u>Ikiru</u></a> (1952)	UR	Foreign	
<a href="#"><u>Junebug</u></a> (2005)	R	Independent	
<a href="#"><u>La Cage aux Folles</u></a> (1979)	R	Comedy	
<a href="#"><u>The Life Aquatic with Steve Zissou</u></a> (2004)	R	Comedy	
<a href="#"><u>Lock, Stock and Two Smoking Barrels</u></a> (1998)	R	Action & Adventure	
<a href="#"><u>Lost in Translation</u></a> (2003)	R	Drama	
<a href="#"><u>Love and Death</u></a> (1975)	PG	Comedy	
<a href="#"><u>The Manchurian Candidate</u></a> (1962)	PG-13	Classics	
<a href="#"><u>Memento</u></a> (2000)	R	Thrillers	
<a href="#"><u>Midnight Cowboy</u></a> (1969)	R	Classics	

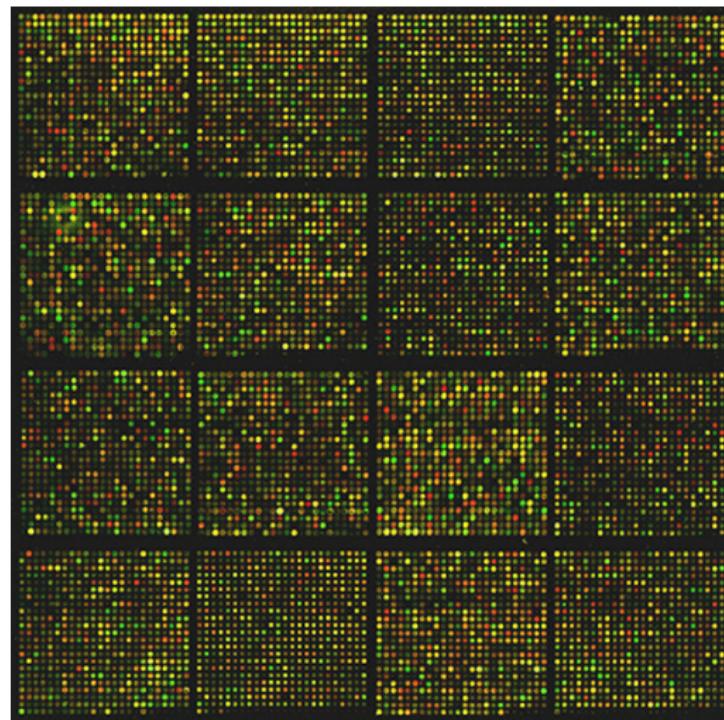
## Purchase histories

Cheese				
0.5/0.51 lb	Cabot Vermont Cheddar	0.51 lb	\$7.99/lb	\$4.07
Dairy				
1/1	Friendship Lowfat Cottage Cheese (16oz)		\$2.89/ea	\$2.89
1/1	Nature's Yoke Grade A Jumbo Brown Eggs (1 dozen)		\$1.49/ea	\$1.49
1/1	Santa Barbara Hot Salsa, Fresh (16oz)		\$2.69/ea	\$2.69
1/1	Stonyfield Farm Organic Lowfat Plain Yogurt (32oz)		\$3.59/ea	\$3.59
Fruit				
3/3	Anjou Pears (Farm Fresh, Med)	1.76 lb	\$2.49/lb	\$4.38
2/2	Cantaloupe (Farm Fresh, Med)		\$2.00/ea	\$4.00 S
Grocery				
1/1	Fantastic World Foods Organic Whole Wheat Couscous (12oz)		\$1.99/ea	\$1.99
1/1	Garden of Eatin' Blue Corn Chips (9oz)		\$2.49/ea	\$2.49
1/1	Goya Low Sodium Chickpeas (15.5oz)		\$0.89/ea	\$0.89
2/2	Marcal 2-Ply Paper Towels, 90ct (1ea)		\$1.09/ea	\$2.18 T
1/1	Muir Glen Organic Tomato Paste (6oz)		\$0.99/ea	\$0.99
1/1	Starkist Solid White Albacore Tuna in Spring Water (6oz)		\$1.89/ea	\$1.89

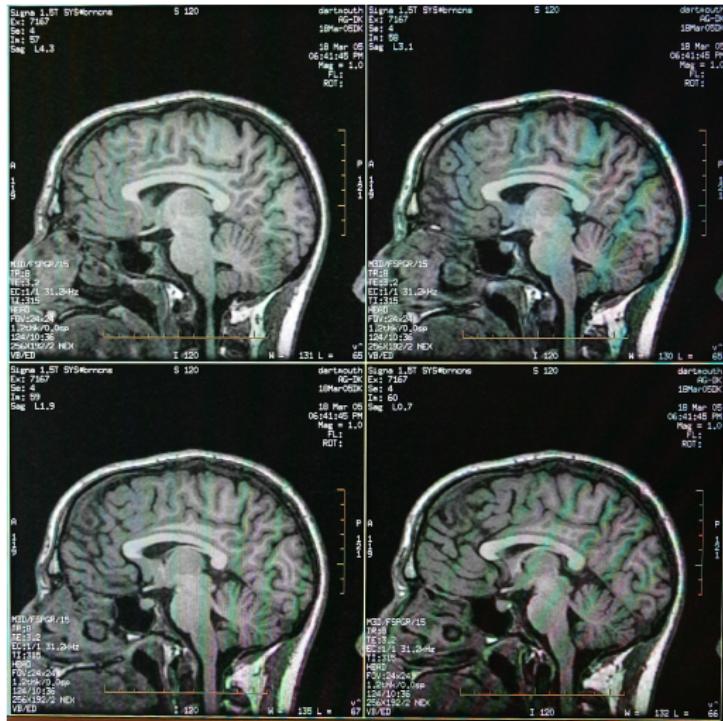
# Document collections

<p>SCIENCE: A WEEKLY RECORD OF SCIENTIFIC PROGRESS. ALPHABETIZED INDEXED AND ILLUSTRATED WITH ARTICLES BY SCIENTISTS FROM ALL PARTS OF THE WORLD.</p> <p>PUBLISHED BY THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.</p>		<p>SCIENCE A WEEKLY JOURNAL DEVOTED TO THE ADVANCEMENT OF SCIENCE</p> <p>SCIENCE NEW SERIES, VOLUME 30 APRIL 17, 1911, NO.</p>	
	<p>SCIENCE Editorial by the AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE</p> <p>Index to Volume 22 January-June 1909</p>		<p>SCIENCE Editorial by the AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE</p> <p>Index to Volume 22 January-June 1909</p>
<p>SCIENCE NEW SERIES, VOLUME 32 JANUARY-JUNE 1911 PUBLISHED QUARTERLY</p>		<p>SCIENCE NEW SERIES, VOLUME 32 JANUARY-JUNE 1911 PUBLISHED QUARTERLY</p>	

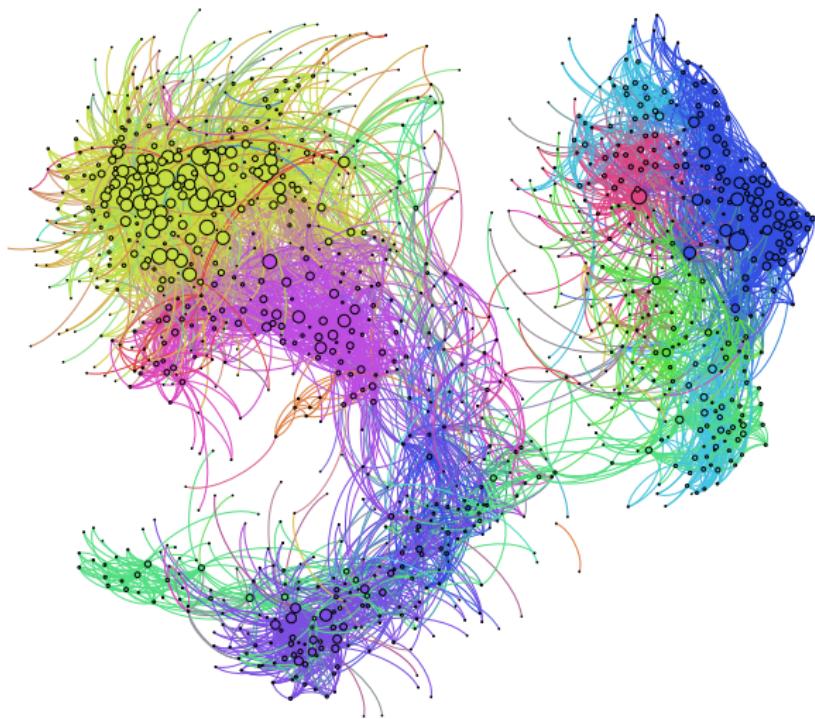
## Genomics



# Neuroscience



## Social networks



# Finance



Data can help us solve problems.

## Mathematical Foundations

Data

X

Answers

Y

Hidden Structure

Z