



# What is Data Science

Data Science: Jordan Boyd-Graber  
University of Maryland

JANUARY 12, 2018

## Mathematical Foundations

Data

X

Answers

Y

Hidden Structure

Z

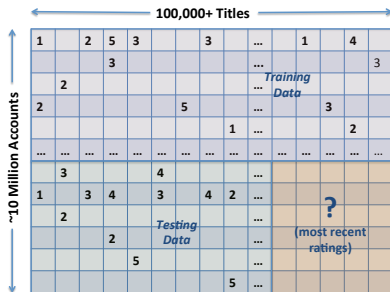
Will NetFlix user 24601 like Transformers?



## Will NetFlix user 24601 like Transformers?



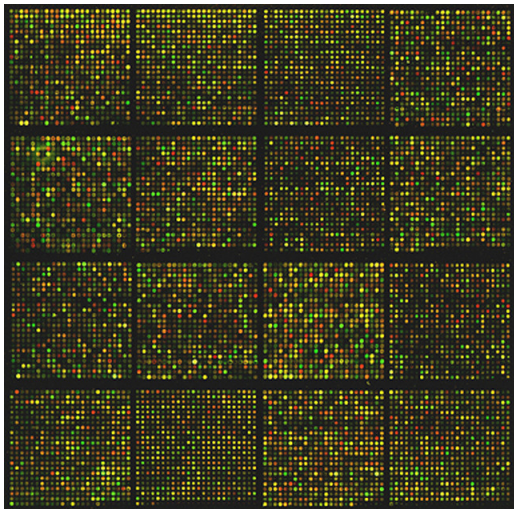
## How do you know?



## Group many images and determine the number of groups



**Which genes are associated with a disease? How can expression values be used to predict survival?**

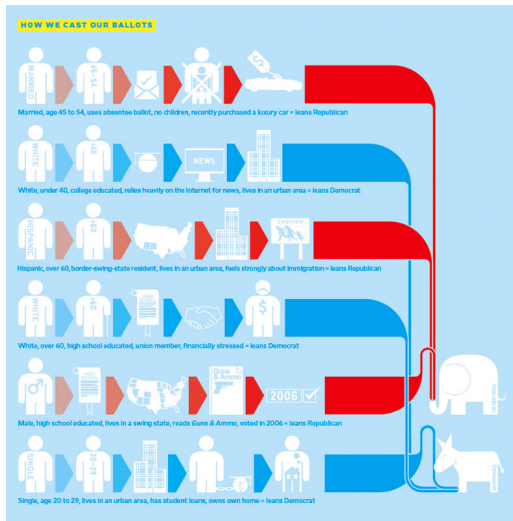


## Is it likely that this stock was traded based on illegal insider information?





## Who will vote and for whom?



## Is this spam?

Subject: CHARITY.

Date: February 4, 2008 10:22:25 AM EST

To: undisclosed-recipients;

Reply-To: s.polla@yahoo.fr

Dear Beloved,

My name is Mrs. Susan Polla, from ITALY. If you are a christian and interested in charity please reply me at : (s.polla@yahoo.fr) for insight.

Respectfully,

Mrs Susan Polla.

## Where are the faces?



Data contain patterns  
that can help us solve problems.