

Big Data/Big Brother

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The views in this presentation are those of the author and do not necessarily represent the views of the Department of the Navy, Department of Defense, or the U.S. Government.

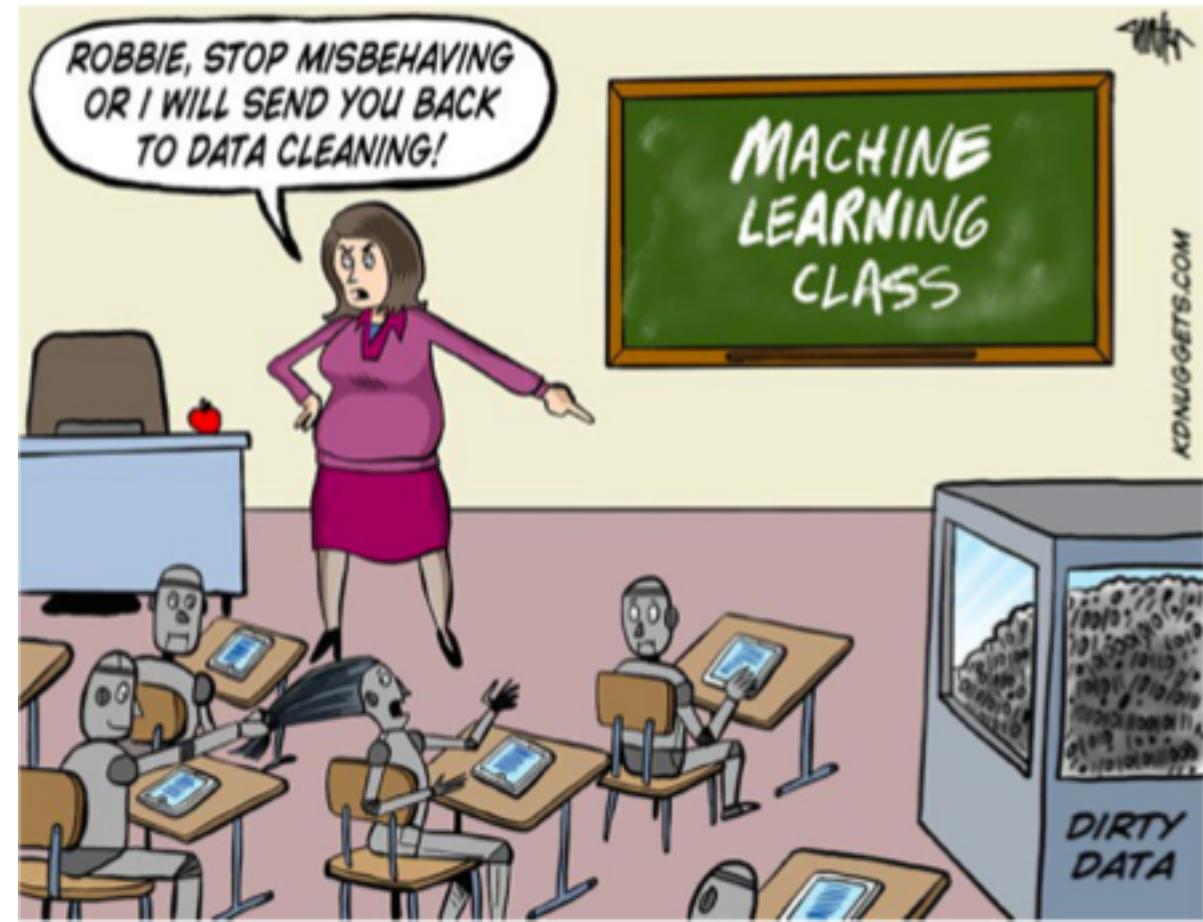
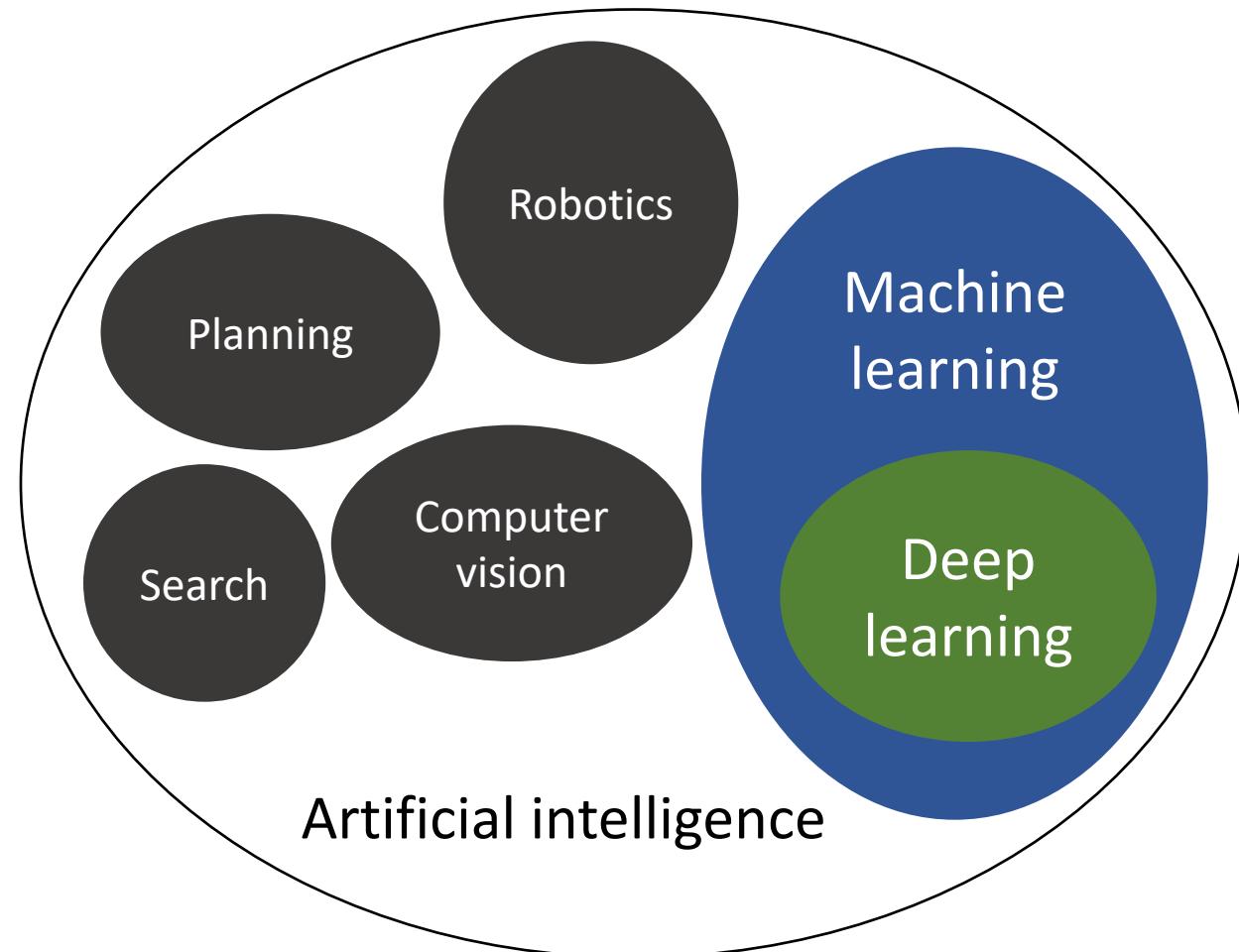
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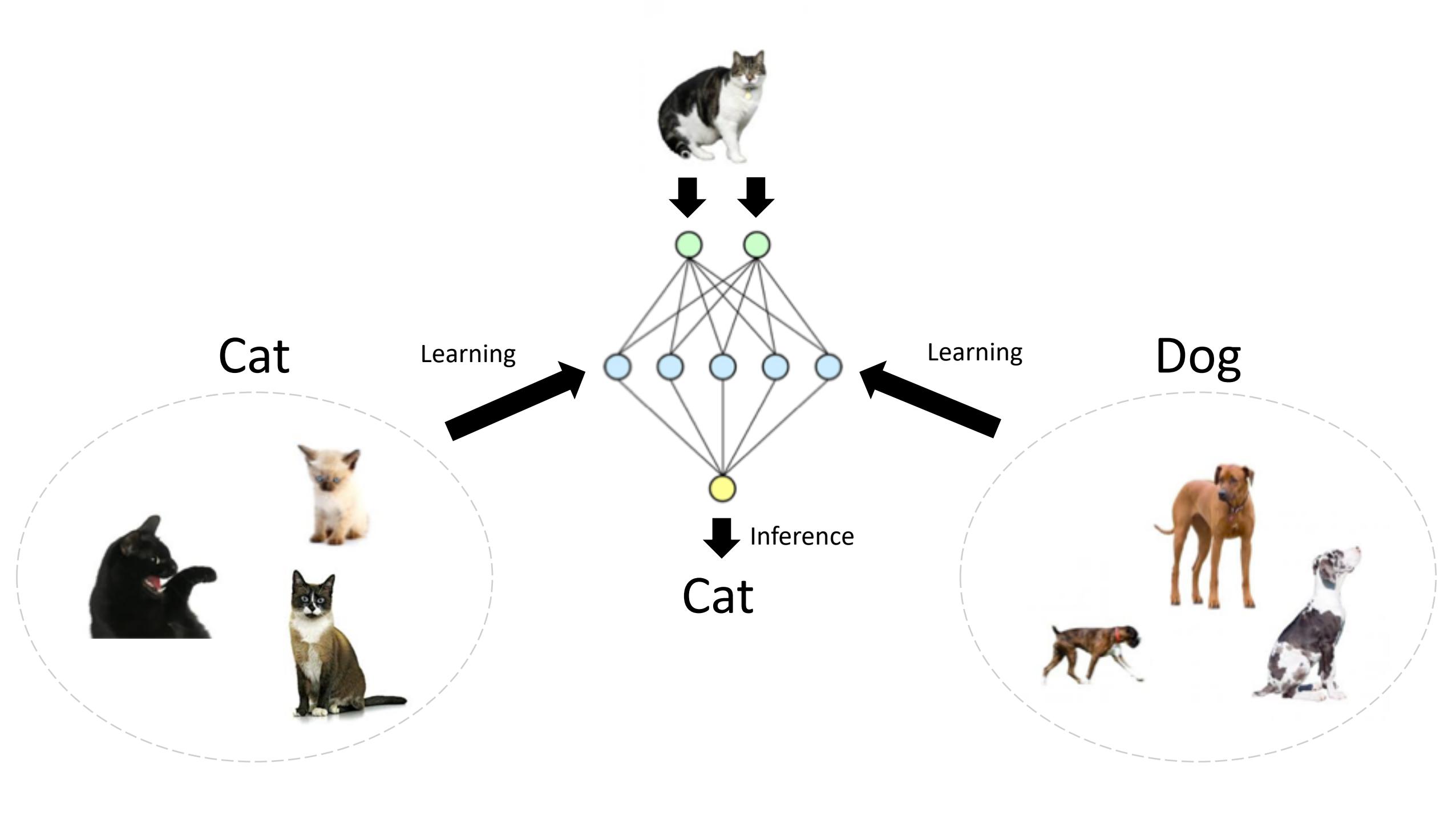


Outline

- Machine learning and Big Data
- Algorithmic bias
- Predictive privacy
- Conclusions/questions

Machine learning





Face recognition accuracy of forensic examiners, superrecognizers, and face recognition algorithms

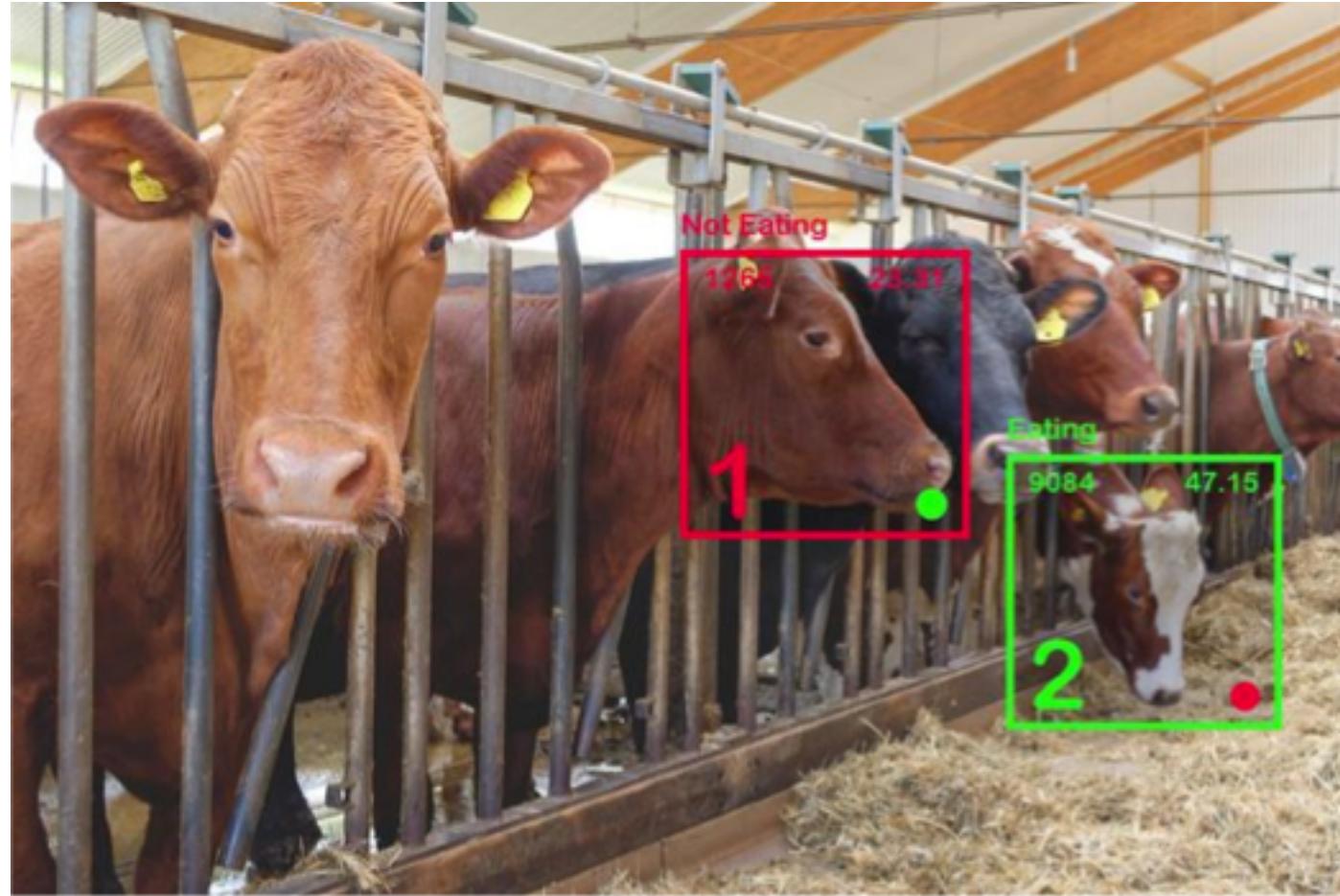
P. Jonathon Phillips^{a,1}, Amy N. Yates^a, Ying Hu^b, Carina A. Hahn^b, Eilidh Noyes^b, Kelsey Jackson^b, Jacqueline G. Cavazos^b, Géraldine Jeckeln^b, Rajeev Ranjan^c, Swami Sankaranarayanan^c, Jun-Cheng Chen^d, Carlos D. Castillo^d, Rama Chellappa^c, David White^e, and Alice J. O'Toole^b



Match



Non-match



Which photo is a real person?



Fake



Fake

Deep fakes



Where does Big Data come from?



Photos/video



Social media



Transactional



Home assistants



Medical devices



Internet of things

Much more...

How big is “big”?

1 Zetabyte = 1,000,000,000,000,000,000 bytes

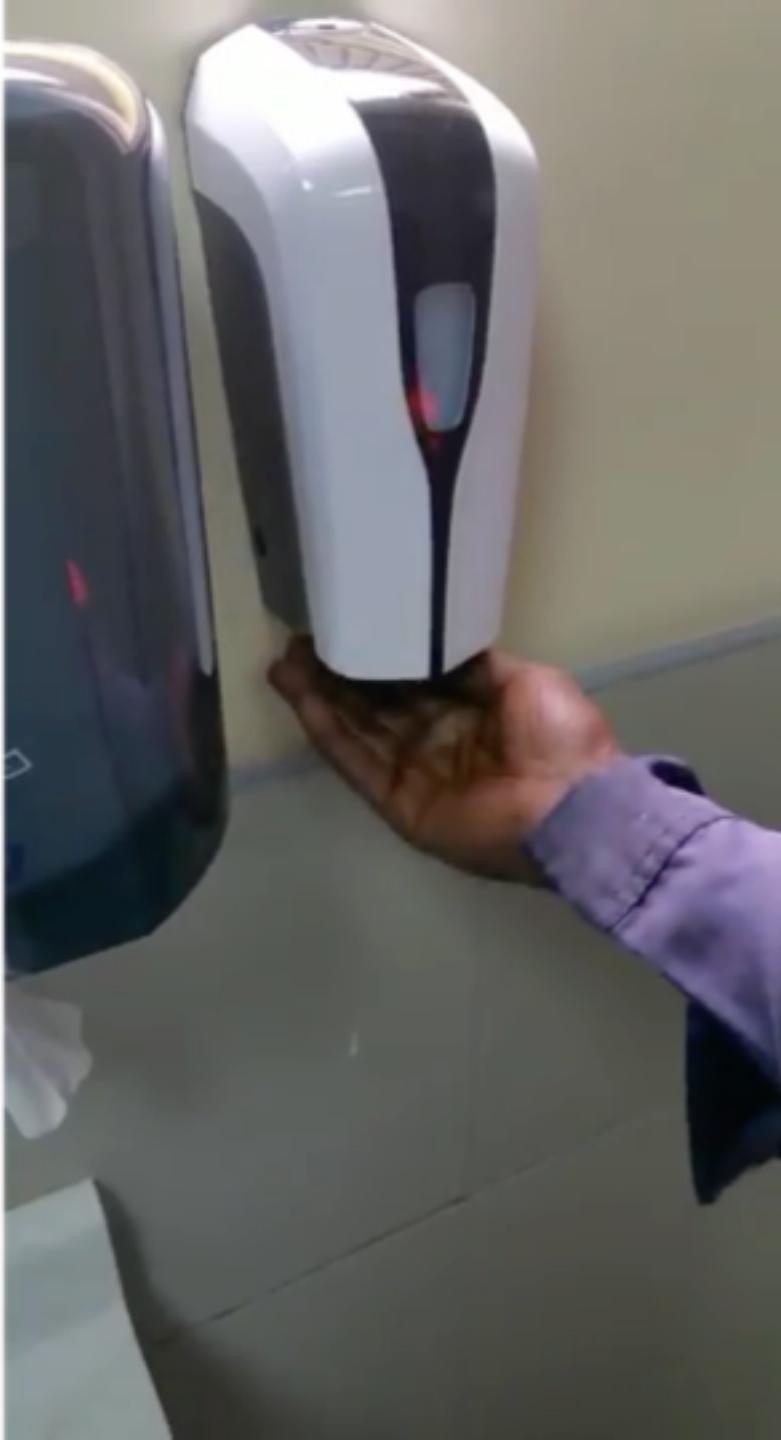
Current Global DataSphere is about 50 ZB



What could go wrong?

Algorithmic bias

Predictive privacy



professor



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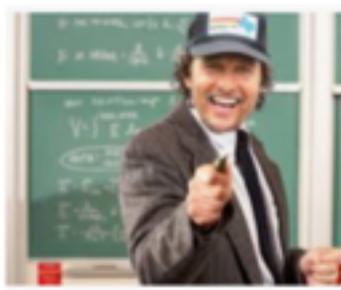
His Nobel Prize ...
goodnewsnetwork.org



Interview with Professor Miller ...
buffalo.edu



It's Hard to Be Ill in Academe ...
chronicle.com



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digest.bps.org.uk



Senior male professor explaining and...
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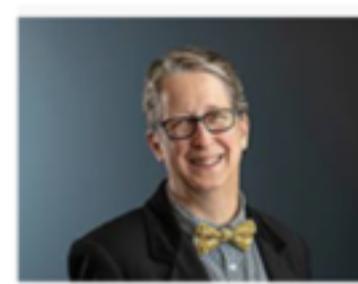
How to Pick the Best Professors | ...
fastweb.com



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OHIO : Distinguished Professors ...
ohio.edu



Schuylkill professor and team aim to ...
news.psu.edu

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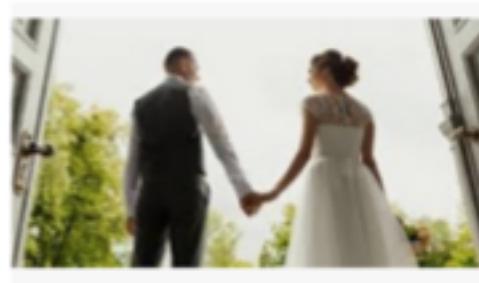
Tax Breaks for Married Couples ...
fool.com



Cheerful Married Couple Standing On The ...
123rf.com



Are married people still happier ...
mercatornet.com



Quizzes For Married Couples - Couple Quiz
marriage.com



World's Shortest Couple Gets Th...
huffpost.com



Just Married Couple S...
dreamstime.com



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Married couple Blank T...
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couple choose surname based on coin toss
finance.yahoo.com



beach Royalty Free Vecto...
vectorstock.com · In stock



Say hello to Paulo and Katyucia - the ...
guinnessworldrecords.com



The Right Swipe: Married Couple Nay...
helogiggles.com



Happy Beautiful Young Married Couple...
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Starting a Family: It's Sti...
earlymenopause.com



Baby Development | Healthy Families BC
healthyfamiliesbc.ca



Family picture poses ...
pinterest.com



Quintuplets joy for parents 'desperate ...
mirror.co.uk



baby in mind at family gatherings ...
jeanhaines.org.au



The Pros and Cons of the Family Bed ...
parents.com



Vision Winston Salem Wedding Photog...
adeleleephoto.com



Beautiful mother, father and baby lying ...
creativemarket.com



Before Having Children...
thriveswla.com



Chubb: Having a baby? 6 ways to prote...
chubb.com



Family and baby portrait | Contemp...
matchbox-photography.com



'cocooning' prevents whooping cough ...
sciencenews.org



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people.com



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white baby with family



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Couple Gives Birth To A White Baby ...
unheardvoicesmag.com



This black Nigerian co...
admin.socialgazette.com



adopting a white baby taught one black ...
today.com



Parents Holding Newbor...
123rf.com



Happy family with a baby on a white ...
colourbox.com



mum gives birth to two white babie...
caternews.com



Mum Gives Birth To Two White ba...
storytrender.com



Another Nigerian Couple With White Baby ...
pmnewsnigeria.com



Mother And Baby Happy Fa...
123rf.com



Black family adopts white baby and ...
shareably.net



Mum Gives Birth To Two White babies ...
storytrender.com



Nigerian Mum Gives Birt...
africaparent.com



Black and Brown and White-ish ...
medium.com

why are black women so



why are black women so angry
why are black women so loud
why are black women so mean
why are black women so attractive
why are black women so lazy
why are black women so annoying
why are black women so confident
why are black women so sassy
why are black women so insecure

ALGORITHMS OF OPPRESSION

HOW SEARCH ENGINES
REINFORCE RACISM

SAFIYA UMOJA NOBLE

Great Apartment in
Anacostia. Parking Available.
No Young Children Please.

For Sale: Great Apartment in Columbia Heights with View



vs



After Lawsuits, Facebook Announces
Changes To Alleged Discriminatory Ad
Targeting

March 19, 2019 - 2:32 PM ET

BIG BROTHER



IS WATCHING YOU

Privacy definitions

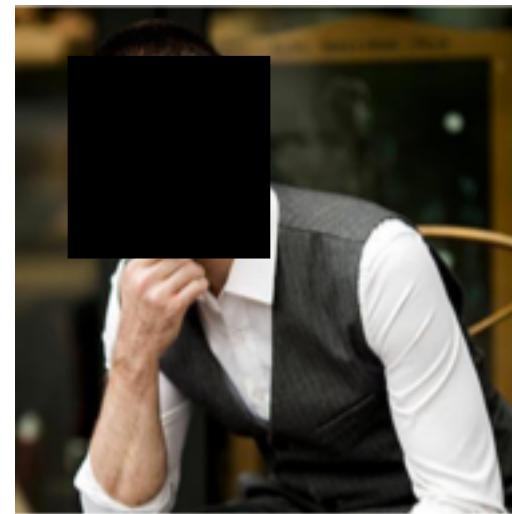
“the quality or state of being apart from company or observation”

– Merriam-Webster Dictionary

“the ability of an individual or group to express themselves selectively.”

– Wikipedia

Face recognition



Stop Searching. Start Solving.

Clearview provides clients with its proprietary technology, database and investigative tools on a subscription basis. A Licensed User's subscription includes:

- ✓ Unlimited Use of CV's Proprietary Research System for its Licensed Users.
- ✓ Unlimited Access to CV's Proprietary Image Database for its Licensed Users.
- ✓ Each Licensed User Account Includes iPhone/Android CV Application
- ✓ Each Licensed User Account Includes Lap/Desktop Versions of CV Program
- ✓ Help-Desk Support

Annual 12-month Subscription Rates: 5 Seats: \$10,000

10 Seats: \$15,000

20 Seats: \$25,000

50 Seats: \$50,000

125 Seats: \$100,000

500 Seats: \$250,000

Unlimited License (Unlimited Users): Negotiated Flat Fee

For More Information: Jessica Medeiros Garrison
(e) Jessica@clearview.ai (c) 205.568.4371

Time is law enforcement's most valuable resource. Clearview puts the world's most advanced facial-recognition technology and largest image database into their hands, allowing them to turn a photograph into a solid lead in an instant.



Tax ID: #2-3397610

Clearview AI, Inc.
135 West 72nd St., Suite 23-S, New York, NY 10023

The Secretive Company That Might End Privacy as We Know It

A little-known start-up helps law enforcement match photos of unknown people to their online images — and “might lead to a dystopian future or something,” a backer says.

By Kashmir Hill

Jan. 18, 2020

Class-action lawsuit filed against controversial Clearview AI startup

Plaintiffs claim New York startup broke Illinois privacy laws regarding the use of residents' biometrics data.

Predictive privacy

Predict private information using machine learning



- 31 years
- White
- Male
- Married



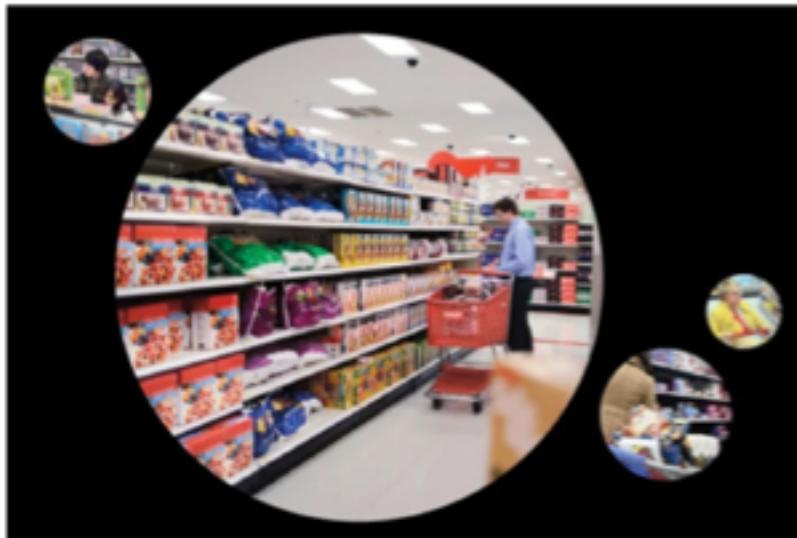
- 30-35 years
- Male
- Household size: 4



How Companies Learn Your Secrets

By Charles Duhigg

Feb. 16, 2012



Antonio Bolfo/Reportage for The New York
Times

AOL Proudly Releases Massive Amounts of Private Data

Michael Arrington @arrington?lang=en / 14 years

Search queries from user 4417749

- “numb fingers”
- “60 single men”
- “dog that urinates on everything”
- “landscapers in Lilburn, Ga”
- “homes sold in shadow lake subdivision gwinnett county georgia.”

A Face Is Exposed for AOL Searcher No. 4417749

By Michael Barbaro and Tom Zeller Jr.

Aug. 9, 2006

Private traits and attributes are predictable from digital records of human behavior

Michal Kosinski^{a,1}, David Stillwell^a, and Thore Graepel^b



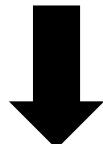
Halloween



Dos Equis

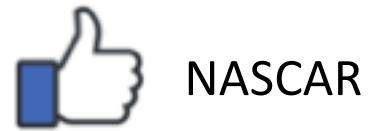


The Joy Of Painting With Bob Ross



Likely...

- White American
- Male
- Parents still married at 21



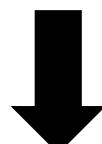
NASCAR



Yahoo



Scrapbooking



Likely...

- Conservative
- Female
- In a relationship

Privacy is essentially contested

Orwell got a few things wrong...

The role of computers

Surveillance by non-state actors

Indiscriminate data collection

Discrimination/Privacy outlook

- Successes
 - 2020 Census will use differential privacy
 - General Data Protection Regulation (GDPR), effective 25 May 2018
 - California Consumer Privacy Act (CCPA), effective 1 Jan 2020
- Suggestions
 - Know your rights in California
 - Consider using an ad blocker, disable 3rd party cookies
 - Use other sources of information besides the Internet (go to the library!)

Thank you

<https://vmonaco.com>

contact@vmonaco.com