
Seeing the Forest and the Trees

— —

Ethics, Opportunity, & Challenge in the Coming Data Boom

University of Bologna 14th C.



Wal Mart and Big Data*

When a hurricane's coming, people buy Pop Tarts!

Why? **Who knows?**

So, Wal Mart moves Pop Tarts to the front of the store

*From: Big Data, by Viktor Mayer Schonberger and Kenneth Cukier



**DATA TREND 1:
BODY TRACKING (Fitbit)**

165,000

Number of Health-Related Apps in the
App Store Alone (Financial Times)

76% of Canadians Own a Smartphone*

-94% of 15-34 year olds

-69% of 55-64 year olds

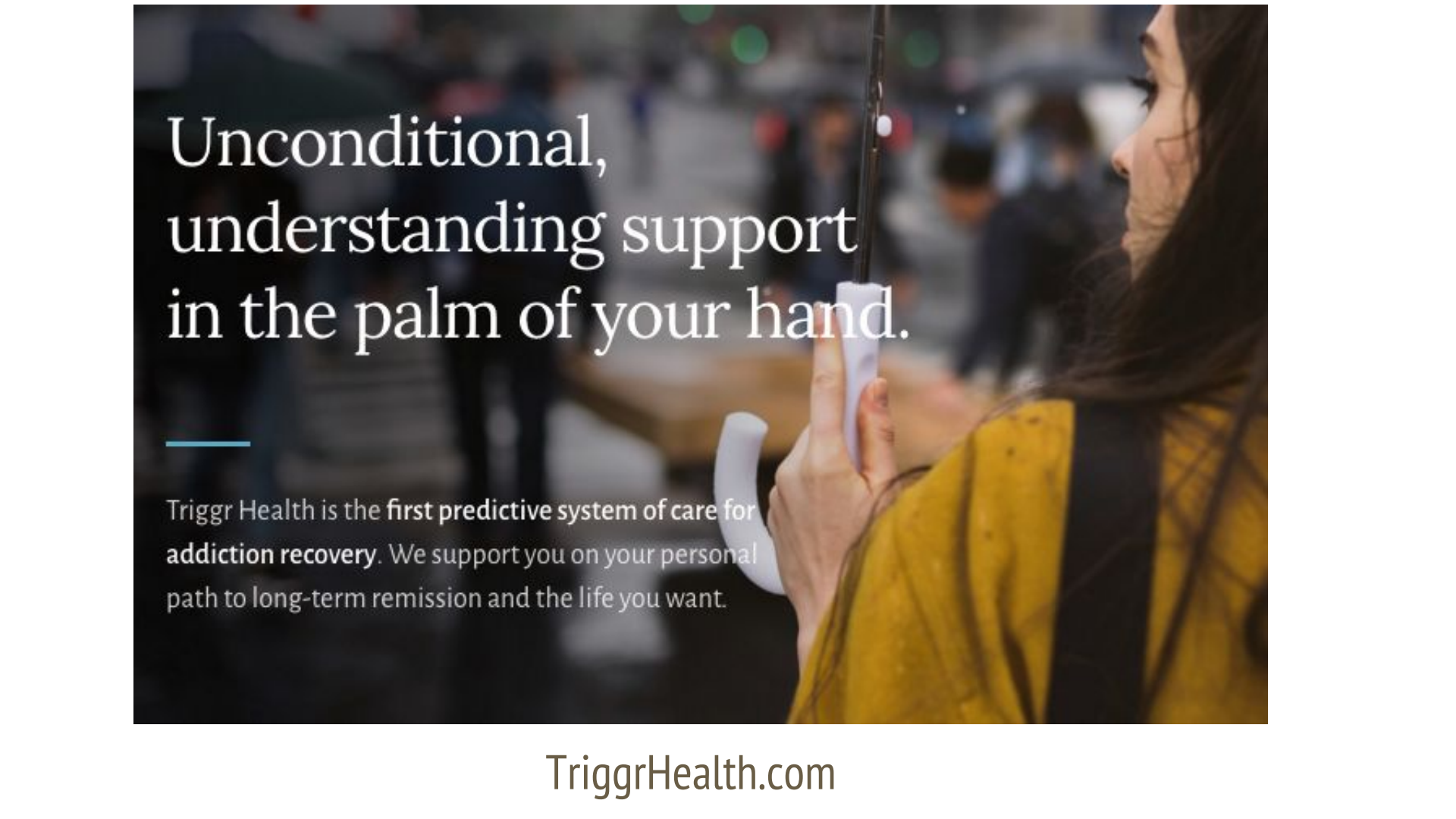
-18% of 75 years or older

*Source Statscan 2016

90% of top free apps and 60% of top paid apps have at least one embedded tracker

50% of users sharing data with 25 or more tracking libraries

Source: Suranga Seneviratne And Dali Kaafar

A woman with long dark hair, wearing a yellow jacket, is shown in profile from the chest up. She is holding a white, handheld device with a screen and a button. The background is a blurred crowd of people, suggesting an outdoor event or festival. The lighting is soft, and there are some bokeh lights in the background.

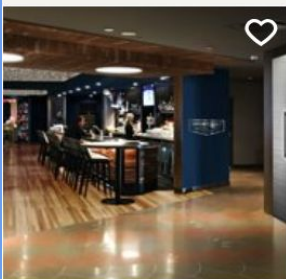
Unconditional,
understanding support
in the palm of your hand.

Triggr Health is the **first predictive system of care for addiction recovery**. We support you on your personal path to long-term remission and the life you want.

TriggrHealth.com

Restaurants near CN Tower

301 Front St W, Toronto, Ontario M5V 3L9, Canada



Sponsored

Sportsnet Grill

4.5 stars 377 Reviews

1-1 Blue Jays Way Toronto Marriott City Centre Hotel

0.238 km from CN Tower

"TORONTO BLUE JAYS TRIP - a check off the bucket list to watch the J's play at the home park"
03/10/2018



Horizons Restaurant at CN Tower

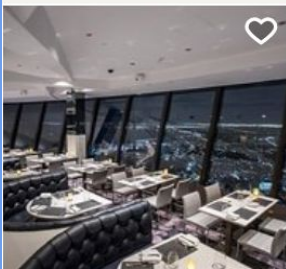
#674 of 6,492 Restaurants in Toronto

4.5 stars 151 reviews

301 Front St W between the Rogers Centre & the Metro Toronto Convention Centre
0 km from CN Tower

"food is ok" 30/08/2018
"AMAZING VIEWS!" 09/07/2018

Cuisines: American, Canadian



360 The Restaurant at the CN Tower

#123 of 6,492 Restaurants in Toronto

4.5 stars 7,691 reviews

301 Front St W
0 km from CN Tower

"Majestic view, wonderful food..." 11/10/2018
"wow what a view for lunch" 09/10/2018

Cuisines: Canadian, International

DATA TREND 2: TRACKING EXPERIENCE

Data Everywhere

As of Feb 27, 2017, people watch a billion hours of video **per day** on YouTube alone

Source: YouTube Blog Feb/2017



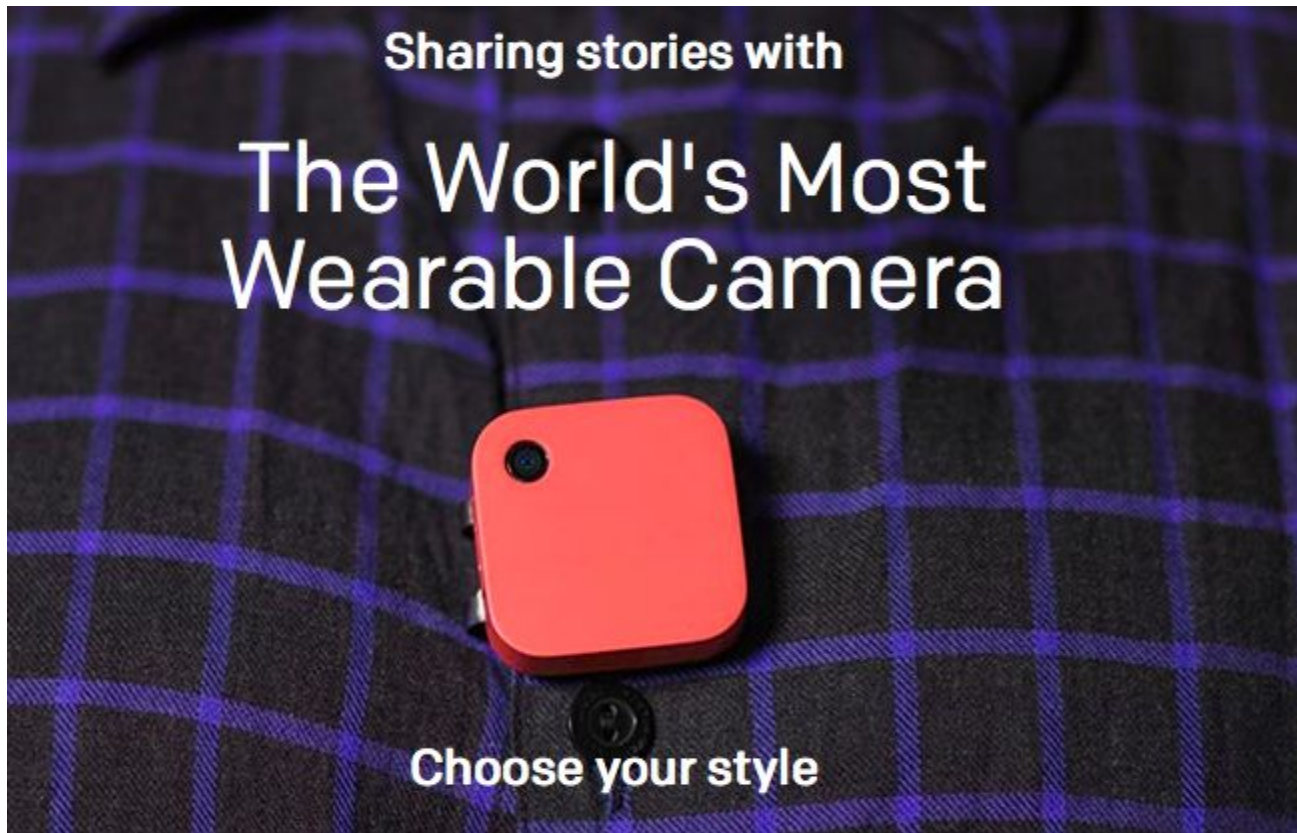
“The value of proprietary map data is approaching zero. In large part, that’s because of free sources like [Open Street Map]”*

*Laura Bliss “Who Owns the Map of the World” - The Atlantic

DATA TREND 3: BOTTOM-UP, LOCATION-BASED MAPPING

POLL:
Are you a Quantified Self-er?

DATA TREND 4: Constant Capture



Sharing stories with

The World's Most Wearable Camera

Choose your style

Next Generation Wearables (getnarrative.com)



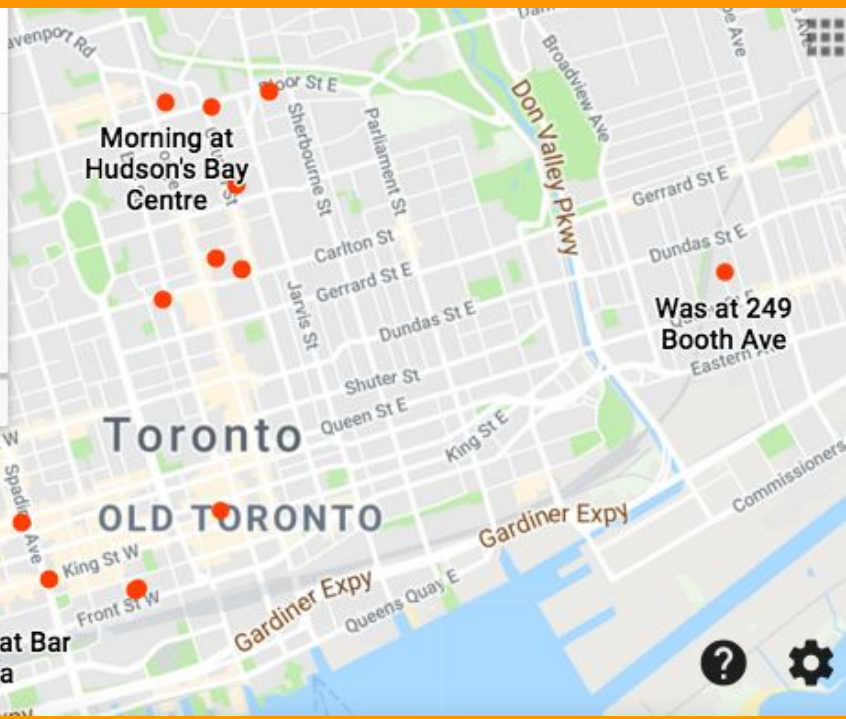
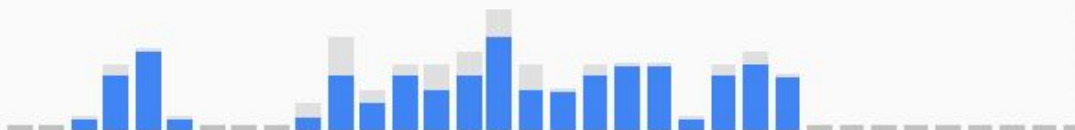
Proteus Digital Health (proteus.com)

Timeline 

TODAY

June

DAY



Google Location History

“Tea.
Earl Grey. Hot”

-Jean-Luc Picard

Over 20 Billion Networked Devices in 2020 (Gartner)

DATA TREND 5: INTERNET OF THINGS

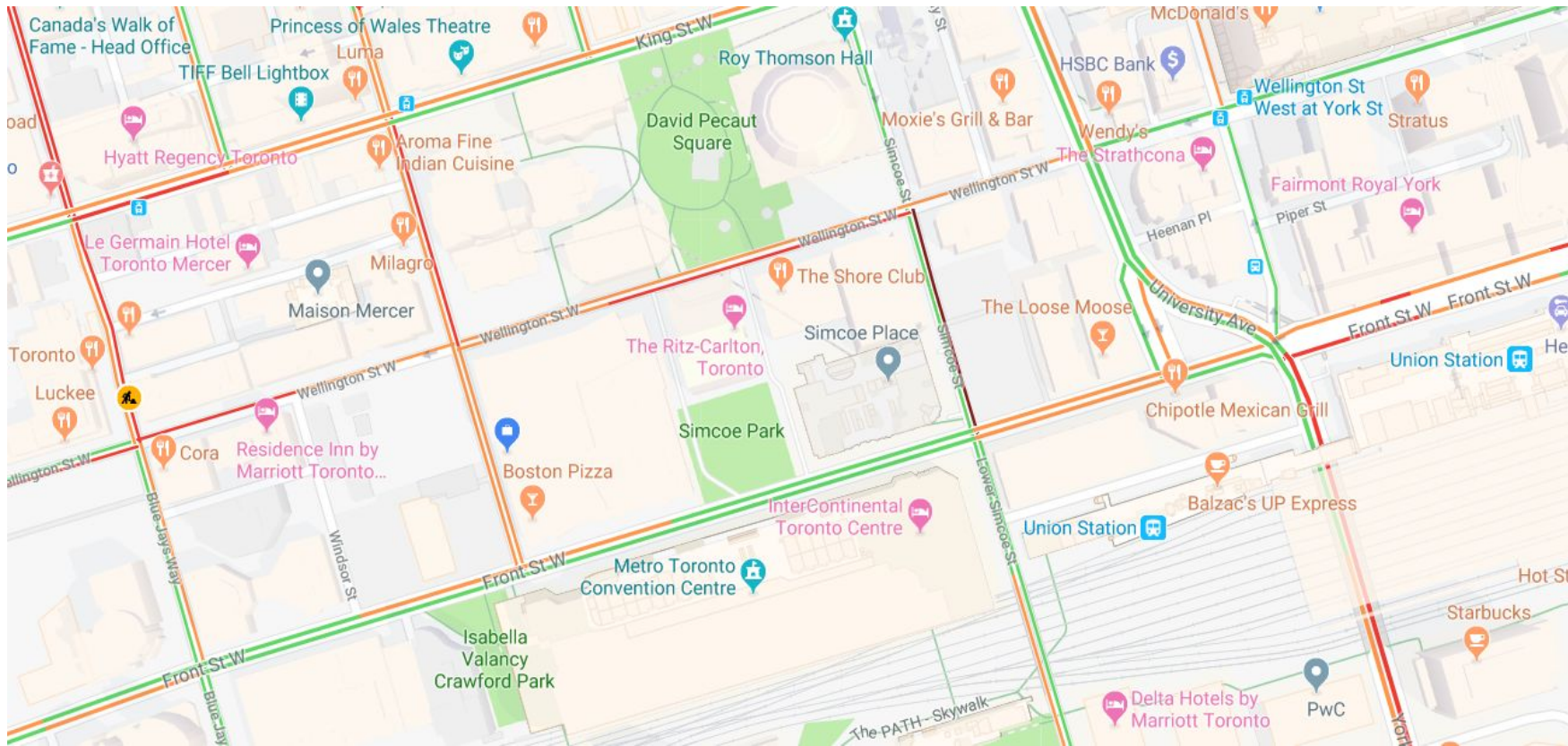
DATA TREND 6: AI AND BIG DATA

This is wonderful.

This is terrifying.

This is powerful.

1. Self-tracking as social phenomenon
2. Mobile technologies like phones, tablets, e-readers, smart watches, smart pills, etc to capture, access and share data
3. Ubiquity of maps that tie data to actual physical locations
4. Smart objects and internet connected sensors that communicate awareness of their environment
5. Ability to search all that data through text, image, and audio



Google Live Traffic

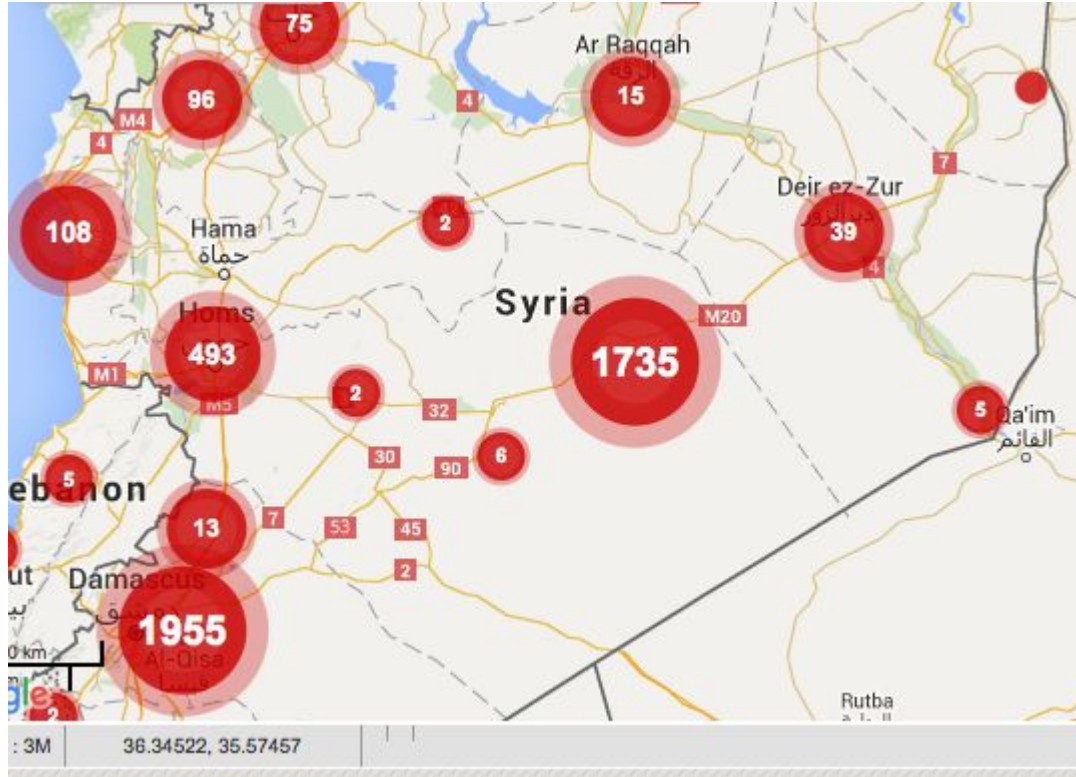
Smartphone Use 2018 (est)

-22% India

-68% China

-32% Nigeria

Source: Statista



Syriatracker.crowdmap.com (Ushahidi)

When is “Good Enough” Good Enough?

*still a role for structured data

*when are public data sets big enough?

THE POWER AND CHALLENGE OF AI

TYRANNY OF ALGORITHMS!

Bias in the Data

LIMITS OF COMPLEXITY



Gigapixel



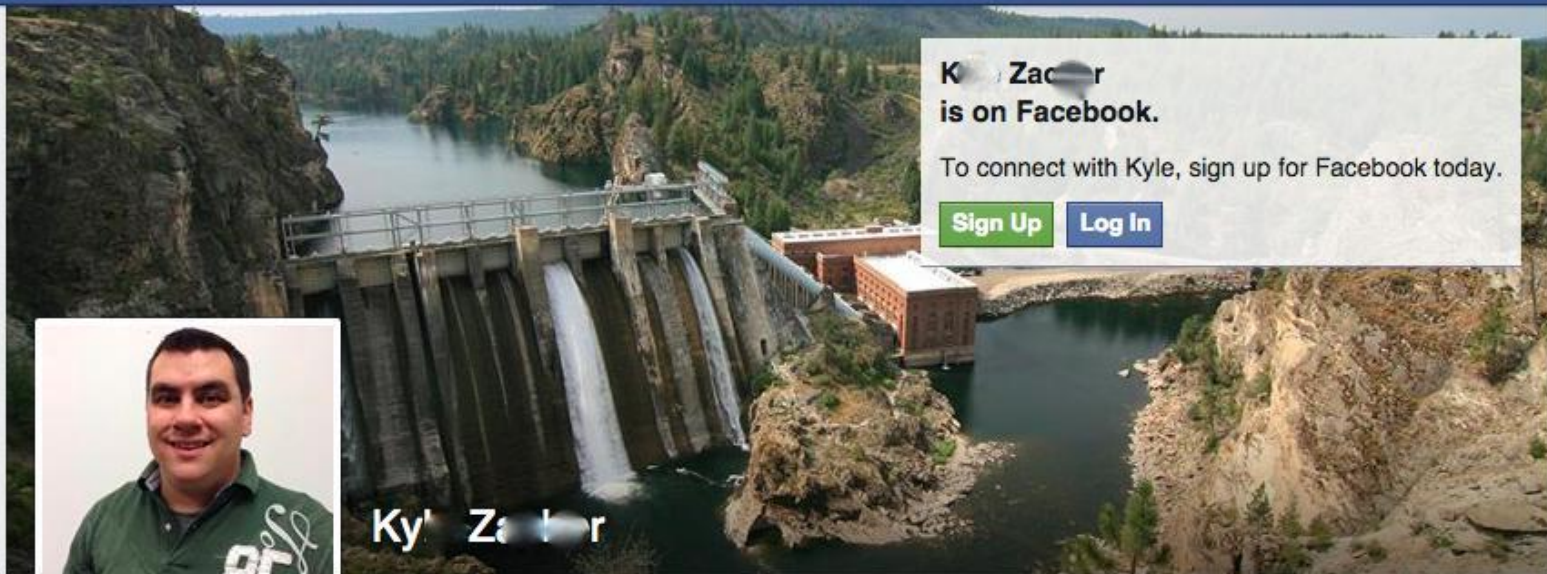




Log In

Keep me logged in

[Forgot your password?](#)



Kyle Zachary

Kyle Zachary is on Facebook.

To connect with Kyle, sign up for Facebook today.

Sign Up

Log In

Favorites

Music



The Beatles



Coldplay



Eminem



deadmau5

Wrong Kyle Zachary? Try Again

Kyle Zachary

Search

Others Named Kyle Zachary

What keeps you up at
night?

The Ethics of the Data Boom

*Global Business Research Firm, Gartner, Just Named 'Digital Ethics and Privacy' a Top Strategic Tech Trend for 2019

*Trustworthiness and Transparency is Key, but also the Broader Ethical Environment

Data as Partnership



How Do we Share Data and Protect Privacy?

- *New systems such as Blockchain
- *New data governance (eg GDPR)
- *Innovative strategies:
 - “New Deal on Data” (Pentland)
 - “Data Commons” (World Econ Forum)

Contact

norayoungster@gmail.com

@nora3000

norayoung.ca