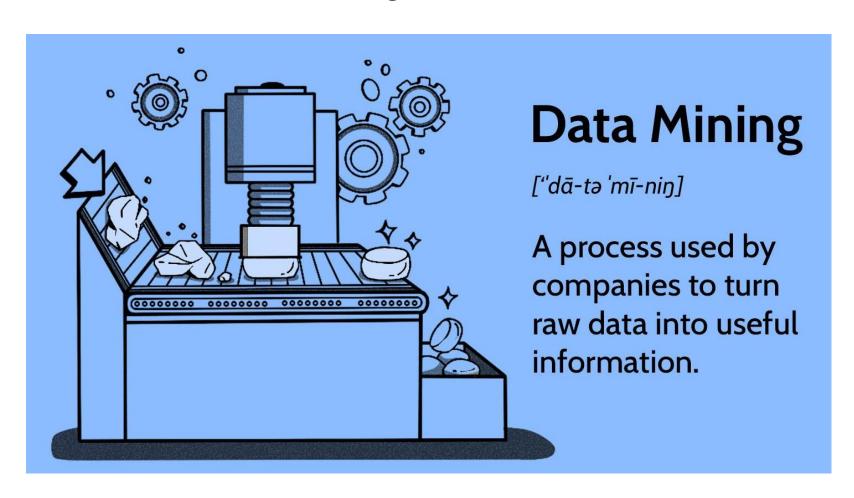
## Blue Kai

The largest data miner



## A "Game"

Think of the person that you know best in the world.

[Family member, friend, significant other]

See how much of the information you know about them.

Keep tally on a sheet.

### How much do you know about your friend?

- 1. What is their full name?
- 2. What is the full name of their parents?
- 3. What is the full name of their siblings?
- 4. What is their address?
- 5. What is their postal code?
- 6. What is their home phone number?
- 7. What is their cell phone number?
- 8. What forms of social media do they use?
- 9. For each form of social media, what is their id?
- 10. What was their last google search?

- 11. What kind of phone do they have?
- 12. What kind of car does their family have?
- 13. What technology do they have at home? (tablets, e-readers, computers, tvs...)
- 14. What was the last game/app they played on their computer?
- 15. How old are they?
- 16. What is the highest form of education they have received?
- 17. How much money do they make a year?
- 18. What are the names of all the educational institutions they have attended?

### How much do you know about your friend?

- 19. What kind of soap do they use?
- 20. What kind of shampoo do they use?
- 21. What bank do they use?
- 22. What is their bank balance?
- 23. What credit cards does their family have?
- 24. What is the last change on the credit card?
- 25. What was the last store they shopped at?
- 26. Which store do they spend the most in?

- 27. What hobbies do they have?
- 28. Where did they last go on vacation?
- 29. How much did they spend on their last vacation?
- 30. Do they have a pet?
- 31. What kind of food does their pet eat?
- 32. What is their favourite food?
- 33. Where do they work?
- 34. What is the most common IP address they use?



- Owned by Oracle.
- They own information about 700 million people.
- They store about 40,000 pieces of information about each person.
- Exabyte of information (1 billion GB, or 10^18 Bytes).
  - All words ever spoken by humans is about 5 EB of info, roughly that size
- They buy this information from website and social media.
- They sell this information to stores and advertisers.

In the year 2011,
Data Mining was an
11 billion-dollar
industry worldwide.

This figure appeared to come out of no where.

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industry worldwide.

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In the year 2019, in the United States, Data Mining made a trillion dollars.

And that was pre pandemic.

And this data is bought and sold.

Microsoft paid \$26.2 billion, or \$260 per active customer, to acquire LinkedIn in 2016

For years, oil has been recognized as one of the world's most valuable commodities. In 2018, data surpassed oil in terms of value.

## Where does the data come from?

How can they possibly know 40,000 things about me?



When you visit a website, any website, or social media, or gaming platform... you send them a packet.





The packet header contains the IP address, which tells the company where you are from, but also your DEVICE ID.



#### Device ID

#### Android Device ID

6F492

Google Service Framework (GSF)

3F888

IMEI

Not found

The DEVICE ID is unique to your phone or computer or laptop or device.

To: 8.8.8.8 (Google)
From: 63.255.173.183
Packet 5 of 6
Device ID: 123446778
Apple IOS 10.3

Hey Google, Can you please tell me where You Tube is?

Thanks, User 63.255.173.183

Now Google knows roughly where you are (IP Address, 63.255.173.183) and which computer, precisely contacted it (123446778).

They also know what you Googled.

They have all of the search requests since they were founded stored.

Data-miners take as many packets as they can get from as many sites as will sell to them.

It's a fairly safe bet that everything you do on-line is stored in a Data Miner's database somewhere

To: 192.168.1.201 (Amazon)
From: 63.255.173.183
Packet 5 of 6
Device ID: 123446778
Apple IOS 10.3

Hey Amazon,
I want to buy Uno for \$6.43. Please
Charge it to MasterCard #34567,
and send it to 23 Hurontario,
Brampton.

Thanks, User 63.255.173.183



Canadian Tire has found that people who buy Premium Bird Seed are among their most valuable customers.





Target found that a major sign of pregnancy in woman was that they changed to un-scented soaps.





Then, they used to send woman ads to get them to come to Target to buy things for their baby.

However, that freaked women out. They wanted to know how Target knew before they'd announced it!



Target changed tactics. They sent out a crafted flyer. On page on were some random ads.





HURRY INI 16 17 18

Advertised prices good Friday, January 16 thru Thursday, January 22, 2015.

**64 loads** Reg. 15.99 Tide 2.72 or 2.95 L laundry detergent shoulders **4**99 SAVE \$15 & Shoulders Reg. 49.99 each, Juggies or Pampers largestmL. hair care 3<sub>for</sub> 2<sub>for</sub>\$5 999 Pepsi, Each, Coca-Cola Lay's 255 g chips 500 m and more Select 12-pk. 355 mL. desse canned soft drinks prices good ist 1 thru igust 7, 2014. Civic Holiday is Monday, August 4. Visit Target.ca for holiday

Inside they sprinkled baby items.
Same message, but the woman didn't know that Target knew they were pregnant.

#### What's this?





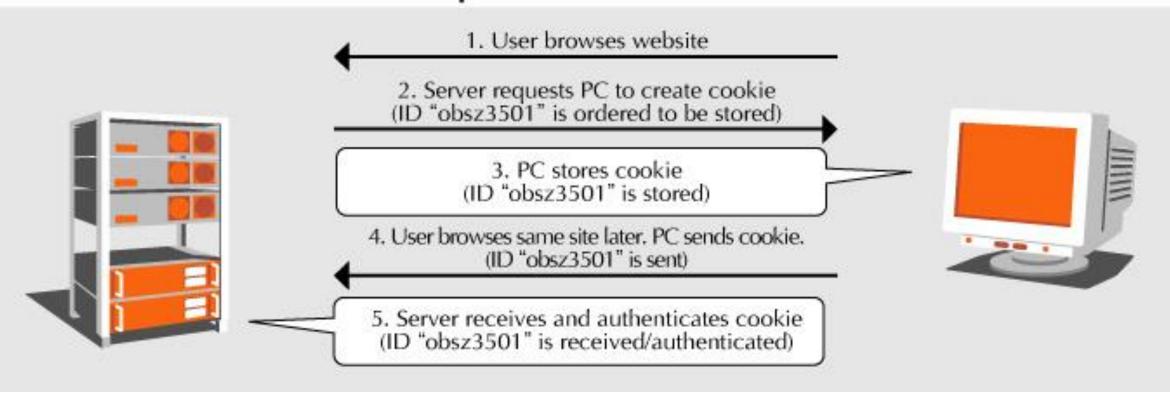
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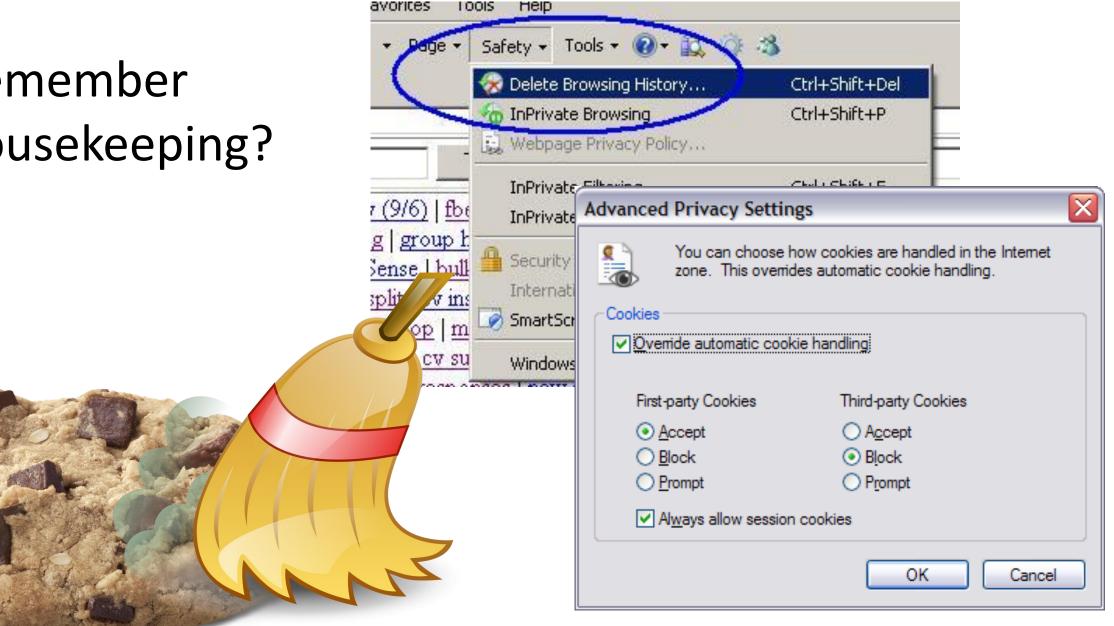
cookies.txt - Notepad File Edit Format View Help # Internet Explorer cookie file, exported for Netscape browsers. FALSE 1631115089 m.webtrends.com TRUE / ACOOKIE C8ctADc4Ljg2LjEyLjIONCOxODc5MDA4MDQ4LjMwMTcONTM3AAAAAAAAAAAAAAAAACqA AAAA6SGdOOKhnTgAAAAA microsoft.com TRUE / FALSE 1631082687 WT\_FPC id=257d8e4a41d2d5ae7a31315359144883:\v=1315359144883:ss=13153591448 microsoft.com TRUE / FALSE 1315 Microsoft.CookieId-cZlf8a5a-f8d8-41ca-aaed-FALSE 1315756890 MICROSOFTSE 8e416c7c8010&Microsoft.CreationDate=09/07/2011 10:32:27&Microsoft.LastVisitDate=09/07/2011 10:32:27&Microsoft.NumberOfVisits=2&SessionCookie.Id=72A42D0242F592 microsoft.com TRUE / FALSE 1347291090 MSID Microsoft.CreationDate=09/07/2011 10:32:27&Microsoft.LastVisitDate= 10:32:27&Microsoft.VisitStartDate=09/07/2011 10:32:27&Microsoft.Coo -456c-8217-9a6635b8308e&Microsoft.TokenId-fffffffff-ffff-ffff-ffffffffffffffffff&Microsoft.NumberOfVisits-2&Microsoft.CookieFirstVisit-Token=AA==&Microsoft.MicrosoftId=0226-0997-6778-3061 microsoft.com TRUE / FALSE 1631115090 MC1 GUTD-ea00102d95307d4e8ab56a636cc10951&HASH-2d10&LV-20119&V-3 microsoft.com TRUE / F 14133c9e63874903aaa9bc7a3ea13354 FALSE 1315756892 microsoft.com TRUE / FALSE 2262526290 I&I=AxUFAAAAAACxBgAAlNwwtcdBrjnMDHGPKq+u+wl! google.com TRUE / FALSE 1378827092 PREF TD=00f45a6215463282:U=c33784278dc9703b:FF=0:TM=1315391548:LM=131539 google.com google.com TRUE / FALSE 1331566291 NID 50-uajtU3FJEG0m99i9naFnB3\_x5U75bqyruiBIJRBkVPyxEewq329dtyS7lQ3b1rHd uuykDUYLgDR30mM5UJCFYlYprL9CKmAGotIu9lIg38qj www.microsoft.com TRUE / FALSE 1631073089 gb:2-en-gb/security:3-en-gb/security/pc-security www.microsoft.com FALSE 1315841488 support.microsoft.com TRUE / FALSE 1321755092 uHczSNujzAEkAAAAMTZjYmM3NzQtNWNmNSOOMzg5LWJ1MmUtMmVhMDM1NzTOMzBixwy 6TX8-w1 TRUE / FALSE 1378868906 twitter.com guest\_id



#### **Example of How Cookies Work**



Remember housekeeping?



## How does Obluekai

### use real-time bidding for

```
Have you ever clicked your mouse right HERE?
```



## Our Social Media Obsession by the Numbers [STATS]



social media. From the time we wake up in the morning to the moment we call it a day, and every moment in between (think bedroom, bathroom and dinner table), we're checking in on our favorite social media sites.



This conclusion comes from data gathered by an independent study (commissioned by Retrevo), which surveyed 1,000 online individuals.



Per the report, our Facebook and Twitter activities continue even after we've hit the hay, with 48% of respondents checking in on activity when they wake...

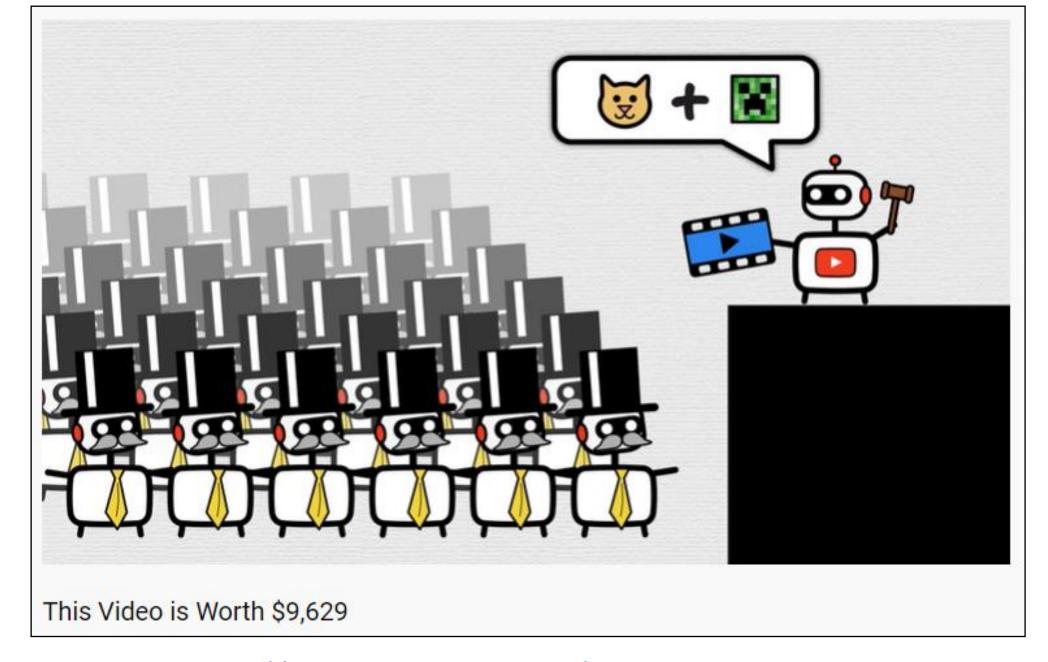




What's this?



TRENDING STORY



https://www.youtube.com/watch?v=KW0eUrUiyxo

2. Server (website, social media)





## Is this legal?

You did click "I agree".





#### Statement of Rights and Responsibilities

Terms you agree to when you use Facebook.



#### Data Use Policy

Information we receive and how it's used.



#### Community Standards

What's not allowed and how to report abuse.

#### For other activity:

- Ads
- Pages
- Promotions
- Platform
- Developer Payments Terms
- **Community Payments Terms**
- Cookies and Pixels
- F Brand Resources
- F Political Engagement



- We receive data from or about the computer, mobile phone, or other devices you use to install Facebook apps or to access Facebook, including when multiple users log in from the same device. This may include network and communication information, such as your IP address or mobile phone number, and other information about things like your internet service, operating system, location, the type including identifiers) of the device or browser you use, or the pages you visit. For example, we may get your GPS or other location information so we can tell you if any of your friends are nearby, or we could request device information to improve how our apps work on your device.
- We receive data whenever you visit a game, application, or website that uses Facebook Platform or visit a site with a Facebook feature (such as a social plugin), sometimes through cookies. This may include the date and time you visit the site; the web address, or URL, you're on; technical information about the IP address, browser and the operating system you use; and, if you are logged in to Facebook, your User ID.
- Sometimes we get data from our affiliates or our advertising partners, customers and other third parties that helps us (or them) deliver ads, understand online activity, and generally make Facebook better. For example, an advertiser may tell us information about you (like how you responded to an ad on Facebook or on another site) in order to measure the effectiveness of and improve the quality of ads.

As described in "How we use the information we receive" we also put together data from the information we already have about you, your friends, and others, so we can offer and suggest a variety of services and features. For example, we may make friend suggestions, pick stories for your News Feed, or suggest people to tag in photos. We may put together your current city with GPS and other location information we have about you to, for example, tell you and your friends about people or events nearby, or offer deals to you in which you might be interested. We may also put together data about you to serve you ads or other content that might be more relevant to you.

Oh oh. The Device ID. IP address. Phone number. GPS. Network information.

#### Information that is always publicly available

The types of information listed below are always publicly available, and they are treated just like information you decided to make public:

#### Name:

This helps your friends and family find you. If you are uncomfortable sharing your real name, you can always delete your account.

#### Profile Pictures and Cover Photos:

These help your friends and family recognize you. If you are uncomfortable making any of these photos public, you can always delete them. Unless you delete them, when you add a new profile picture or cover photo, the previous photo will remain public in your profile picture or cover photo album.

#### Networks:

This helps you see who you will be sharing information with before you choose "Friends and Networks" as a custom audience. If you are uncomfortable making your network public, you can leave the network .

#### Gender:

This allows us to refer to you properly.

#### Username and User ID:

These allow you to give out a custom link to your timeline or Page, receive email at your Facebook email address, and help make Facebook Platform possible.

# Huh. They own your pictures too.

While you are allowing us to use the information we receive about you, you always own all of your information. Your trust is important to us, which is why we don't share information we receive about you with others unless we have:



- received your permission;
- given you notice, such as by telling you about it in this policy; or
- removed your name and any other personally identifying information from it.

Of course, for information others share about you, they control how it is shared.

We store data for as long as it is necessary to provide products and services to you and others, including those described above. Typically, information associated with your account will be kept until your account is deleted. For certain categories of data, we may also tell you about specific data retention practices.

We may enable access to public information that has been shared through our services.

We may allow service providers to access information so they can help us provide services.

We are able to suggest that your friend tag you in a picture by scanning and comparing your friend's pictures to information we've put together from your profile pictures and the other photos in which you've been tagged. If this feature is enabled for you, you can control whether we suggest that another user tag you in a photo using the "Timeline and Tagging" settings. Learn more at: https://www.facebook.com/help/tag-suggestions

## "Your trust is important to us"

So we can show you content that you may find interesting, we may use all of the information we receive about you to serve ads that are more relevant to you. For example, this includes:

- information you provide at registration or add to your account or timeline,
- things you share and do on Facebook, such as what you like, and your interactions with advertisements, partners, or apps,
- keywords from your stories, and
- things we infer from your use of Facebook.

For many ads we serve, advertisers may choose their audience by location, demographics, likes, keywords, and any other information we receive or infer about users. Here are some of the ways advertisers may target relevant ads:

- demographics and interests: for example, 18 to 35 year-old women who live in the United States and like basketball;
- topics or keywords: for example, "music" or people who like a particular song or artist;
- Page likes (including topics such as products, brands, religion, health status, or political views): for example, if you like a Page about Gluten-free food, you may receive ads about relevant food products; or
- categories (including things like "moviegoer" or a "sci-fi fan"): for example, if a person "likes"
  the "Star Trek" Page and mentions "Star Wars" when they check into a movie theater, we
  may infer that this person is likely to be a sci-fi fan and advertisers of sci-fi movies could ask
  us to target that category.

We use everything to profile you.

#### Cookies, pixels and other similar technologies

Cookies are small pieces of data that are stored on your computer, mobile phone or other device. Pixels are small blocks of code on webpages that do things like allow another server to measure viewing of a webpage and often are used in connection with cookies.

We use technologies like cookies, pixels, and local storage (like on your browser or device, which is similar to a cookie but holds more information) to provide and understand a range of products and services. Learn more.

We use these technologies to do things like:

- make Facebook easier or faster to use;
- enable features and store information about you (including on your device or in your browser cache) and your use of Facebook;
- deliver, understand and improve advertising;
- monitor and understand the use of our products and services; and,
- protect you, others and Facebook.

For example, we may use these tools to know you are logged in to Facebook, to help you use social plugins and share buttons, or to know when you are interacting with our advertising or Platform partners.

We may ask advertisers or other partners to serve ads or services to computers, mobile phones or other devices, which may use a cookie, pixel or other similar technology placed by Facebook or the third party (although we would not share information that personally identifies you with an advertiser).

We use cookies. We share with others who do too.

We delete your name (useless), but not your device id or anything useful.

#### Security and bugs

We do our best to keep your information secure, but we need your help. For more detailed information about staying safe on Facebook, visit the Facebook Security Page. We try to keep Facebook up, bug-free and safe, but can't make guarantees about any part of our services or products.

#### Change of Control

If the ownership of our business changes, we may transfer your information to the new owner so they can continue to operate the service. But they will still have to honor the commitments we have made in this Data Use Policy.

#### Notice of Changes

If we make changes to this Data Use Policy we will notify you (for example, by publication here and on the Facebook Site Governance Page).

If the changes are material, we will provide you additional, prominent notice as appropriate under the circumstances. You can make sure that you receive notice directly by liking the Facebook Site Governance Page.

If hackers get in and steal your information, we are sorry.

The data belongs to us. We can be sold. So can your data.

## So what can you do about this?

Opt out.

Turn on all of your privacy settings.

Practice good digital citizenship.

#### BlueKai respects your right to privacy.

As a consumer, you have the choice to exclude your anonymous preferences from being collected in the BlueKai Registry. This includes any preferences you have manually selected and also implied preferences collected through our publisher and data partners. Remember, BlueKai opt outs are only acknowledged on BlueKai partner sites only. To opt-out of the BlueKai Registry, click the button below:

OPT OUT

To opt-out of targeting by other companies, visit the Network Advertising Initiative at <a href="http://www.networkadvertising.org/choices/">http://www.networkadvertising.org/choices/</a>, or the Digital Advertising Alliance (DAA) at <a href="http://www.aboutads.info/choices/">http://www.aboutads.info/choices/</a>.

If you change your mind and want to preview or update your online preferences through the BlueKai registry, please click here.

- BlueKai is a full compliance member of the Network Advertising Initiative (NAI). If you have opted out of all NAI member sites, you do not need to opt out again.
- BlueKai has recently rolled out an open-source solution as a mechanism for protecting opt-out preferences. <u>Click here</u> to learn more.
- By opting in/out of the BlueKai cookie you are also opting in/out of targeting options from BlueKai through some of our third party partners including Yahoo Ad Network.

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Not breaking the law. So what's the problem?

OPT OUT

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Simple.

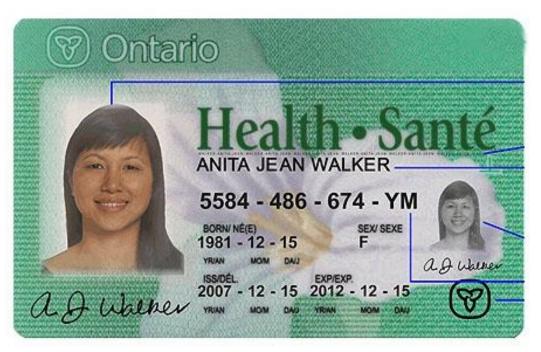
How can you opt out of something you don't even know you are in?

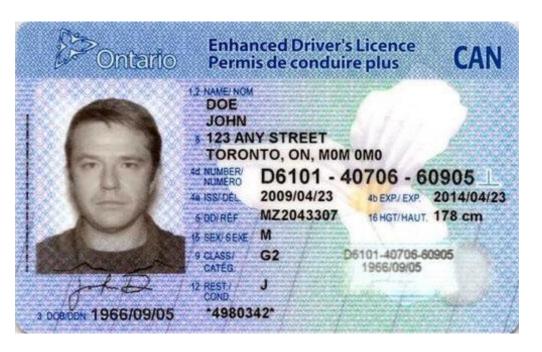
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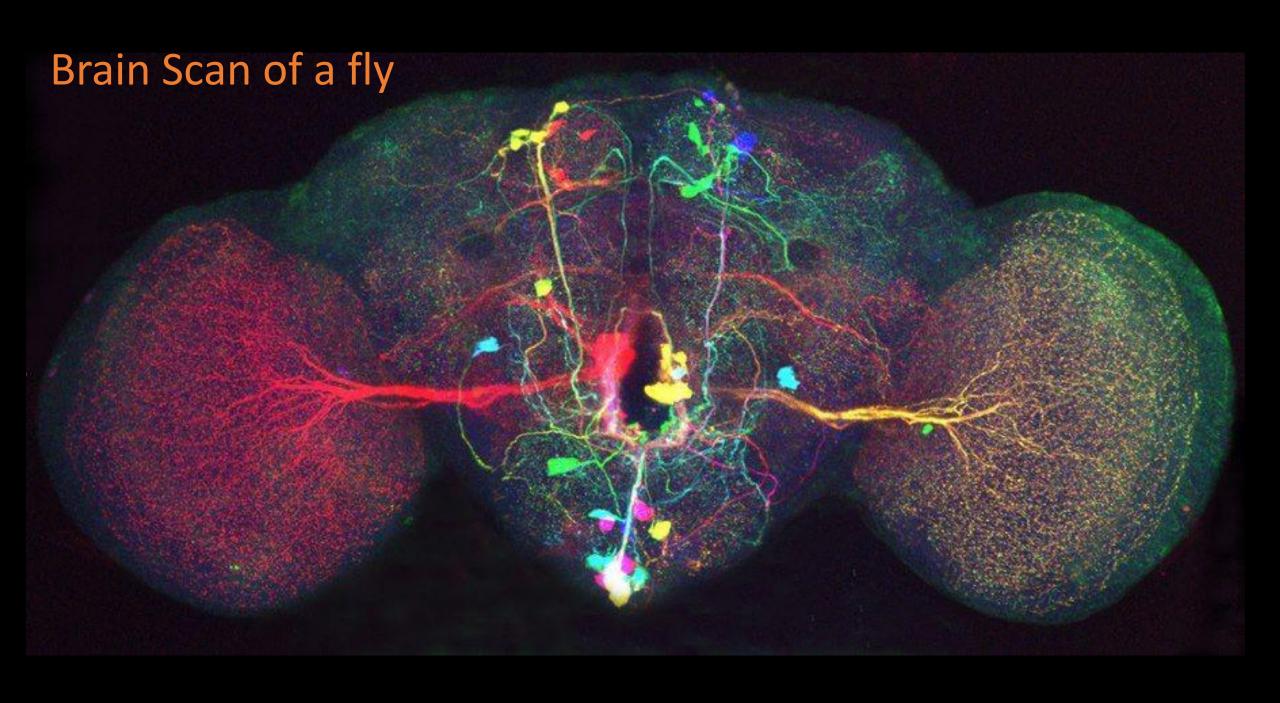


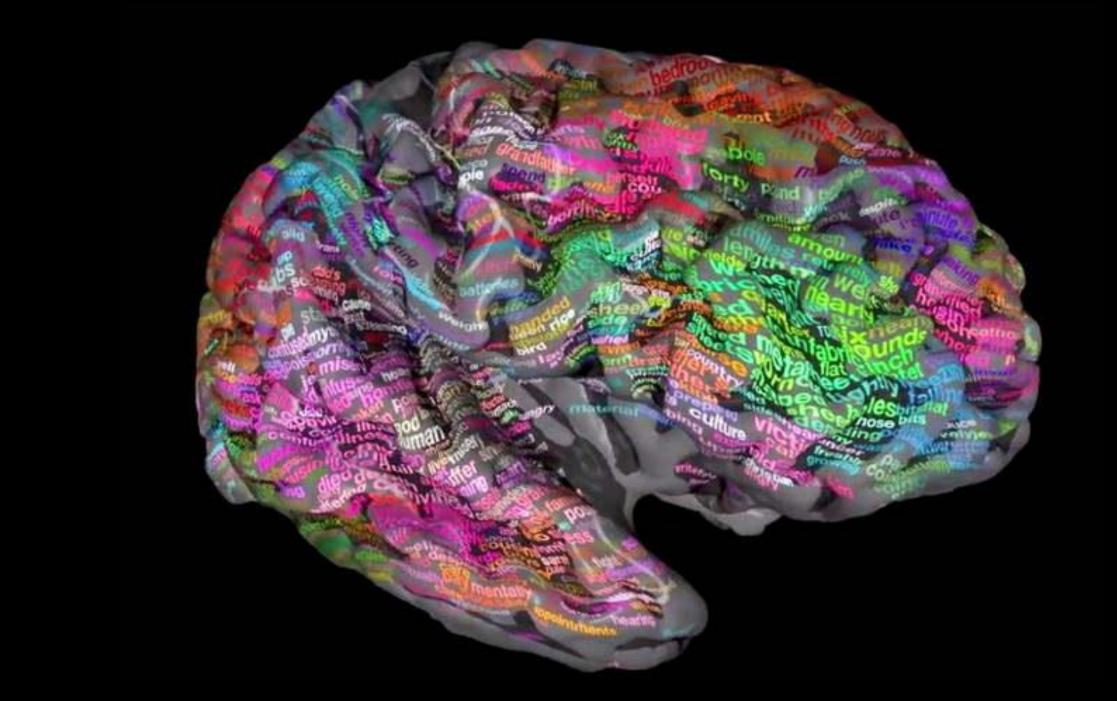
















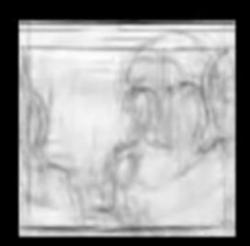
Presented movie

Decoded movie









#### Presented clip



# Clip reconstructed from brain activity



### Presented clip



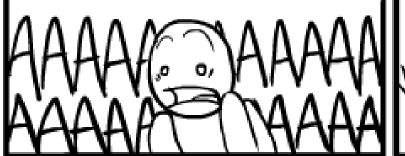
## Clip reconstructed from brain activity



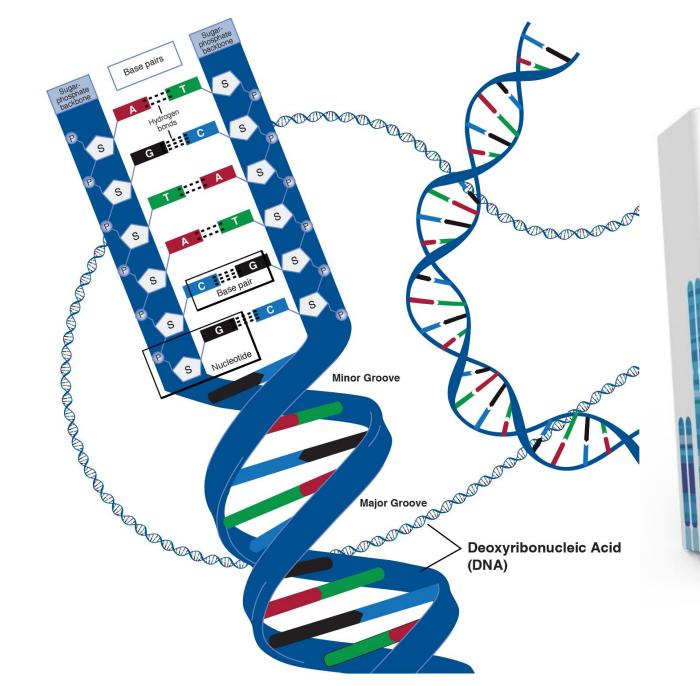
Gallant, UC Berkley, 2011

#### chainsawsuit.com

though rudimentary it may pave the way to reconstructing other thought images such as memories or dreams



we asked people on the street how they felt about this amazing research





Golden State Killer was found through ancestry sites.

