UNIVERSITY of HAWAI'I®
MAUI COLLEGE

Faculty Workshop – May 2018
Module 1 - CyberSecurity Update

Debasis Bhattacharya, JD, DBA
University of Hawaii Maui College
debasisb@Hawaii.edu
@uhmcabit
maui.hawaii.edu/cybersecurity

Ethical Issues

- Disinformation
- Accuracy
- Credibility
- Reliability
- Abuse of Power
  - Integrity
- Exploitation
- Privacy
- Aggregation
  - Confidential and Classified Data/Info

Cambridge Analytica whistleblower: Data could have come from more than 87 million users, be stored in Russia

By Caroline Kelly

Updated 4:43 PM ET, Sun April 8, 2018

Privacy and Social Media

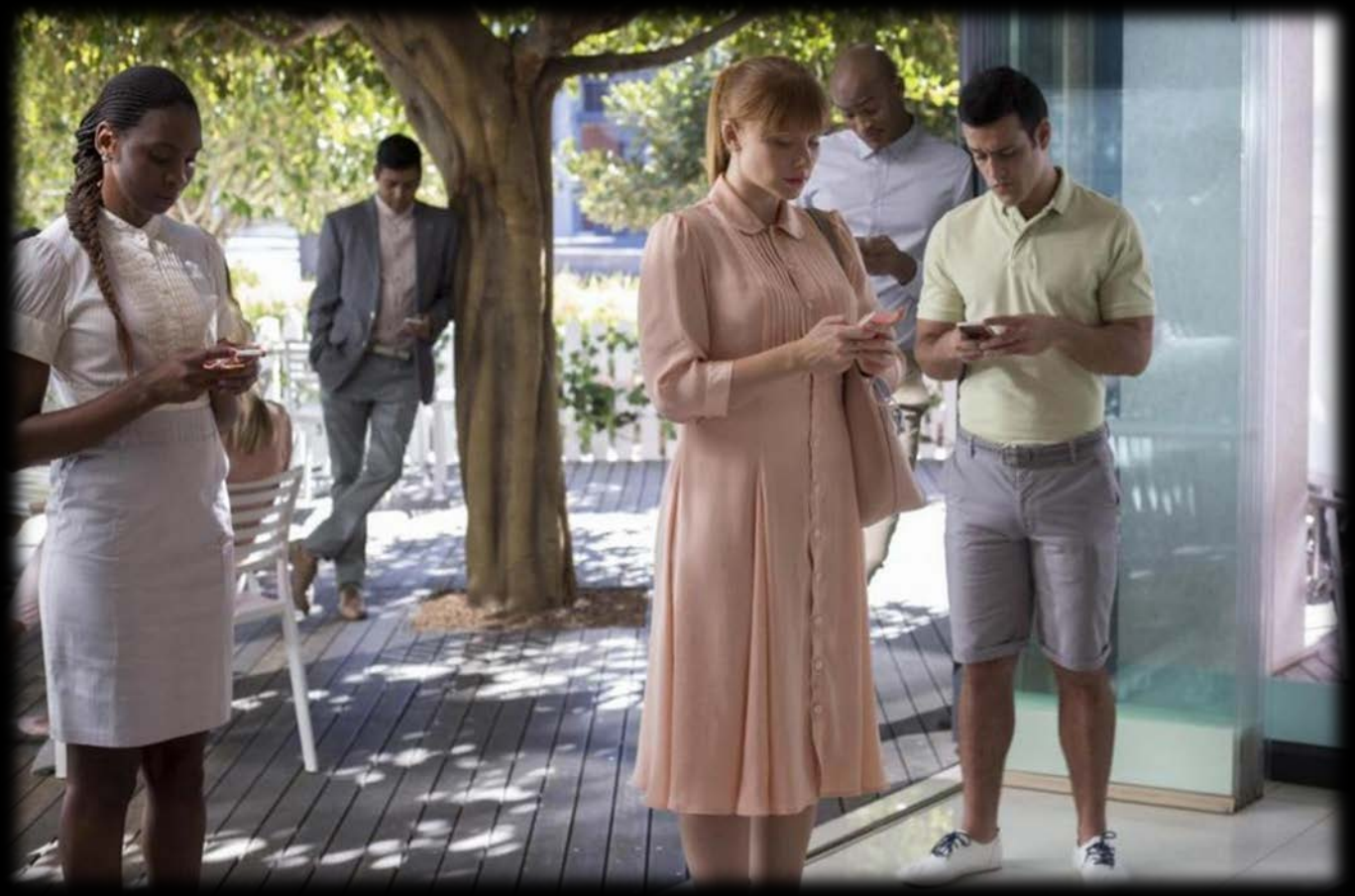
- Privacy Arguments
  - Pro:
    - "I have nothing to hide."
  - Con:
    - Those stories we don't want our bosses knowing about…

Brandy Vela

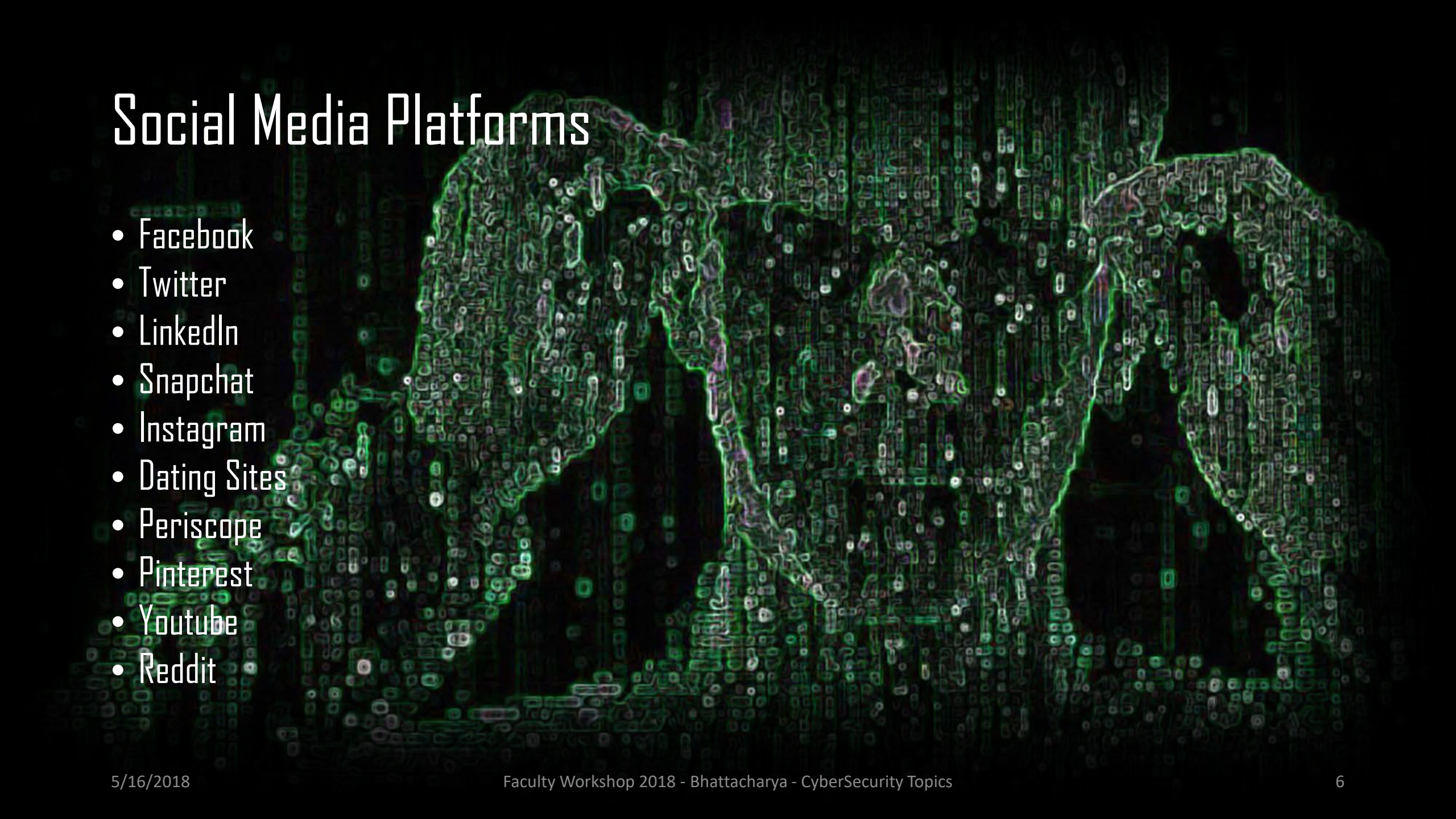
- On November 29, 2016, Brandy committed suicide after online bullying through social media accounts escalated.
- Individuals would create fake profiles and write her cruel messages. In addition, individuals would post her phone number online with solicitations for "free sex."

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

The Quest for Approval…



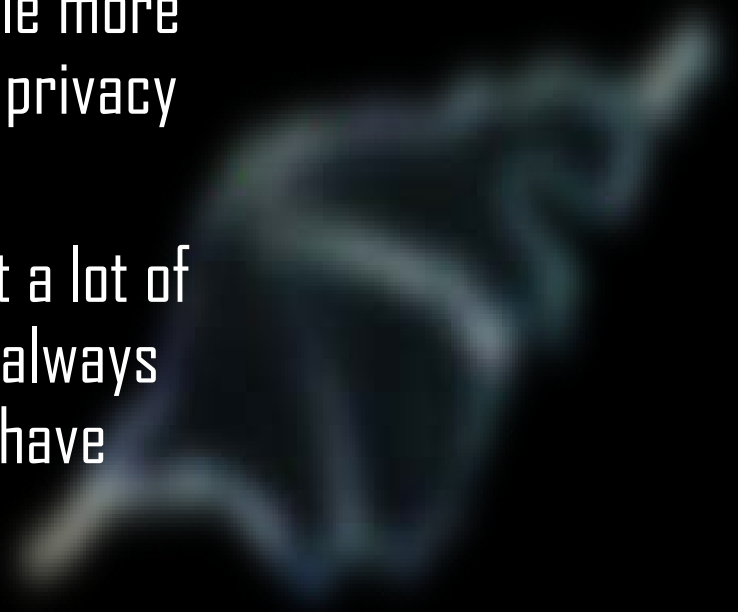
Social Media Platforms



- Facebook
- Twitter
- LinkedIn
- Snapchat
- Instagram
- Dating Sites
- Periscope
- Pinterest
- Youtube
- Reddit

Facebook

- Connects millions of people…which can help us build a persons network
- Information is often a little more secure thanks to FB new privacy settings
- However…we can still get a lot of information (and we can always get the information they have private)



Data Policy

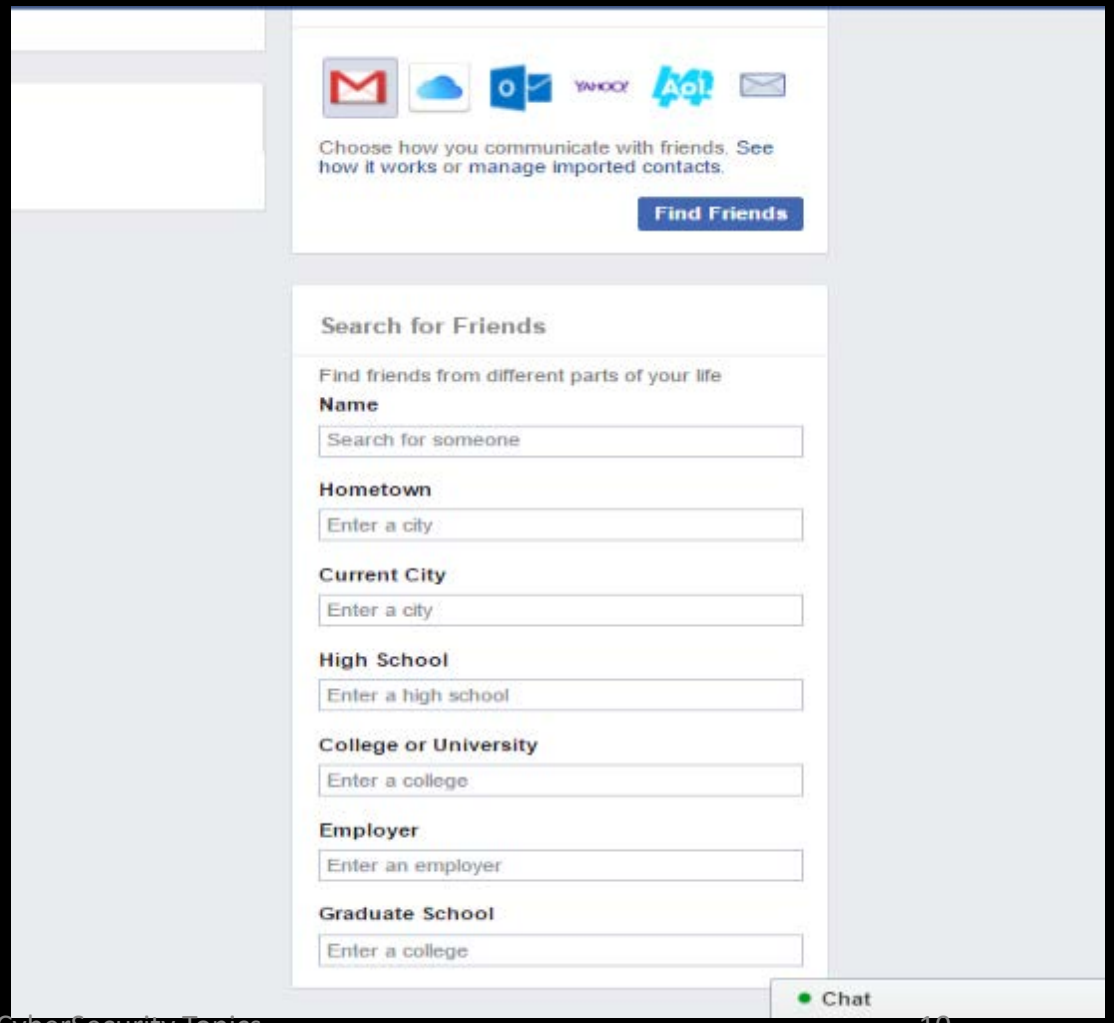
- What kinds of information does Facebook collect?
  - Things you do and the info you provide.
  - Thing others do and the info they provide.
  - Your networks and connections.
  - Information about payments.
  - Device Information
  - Information from websites and apps that use FB.
  - Information from 3rd party partners
  - Facebook companies.
- How is this information shared?
  - People you share and communicate with.
  - People that see content others share about you.
  - Apps, websites, and 3rd party integrations on or using FB.
  - Sharing within Facebook Companies.
  - New Owner.
  - Advertising, Measurement, and Analytics Services (Non PII only)
  - Vendors, service providers, and other partners.

Facebook Services

- Information
  - No, we don't sell any of your information to anyone and we never will.
- Fake Accounts
  - A fake account is an account where someone is not representing their authentic self. Fake accounts can include accounts for fake or made up people, pets, celebrities, or organizations.
- Friending
  - You can add a friend by searching for them and sending them a friend request. If they accept, you automatically follow that person, and they automatically follow you — which means that you may see each other's posts in News Feed. If you'd like to see updates from people you find interesting but don't know personally, like a journalist or celebrity, try following them instead.

How do I find people on Facebook?

- Facebook friend finder
- Typing the persons name directly into the search bar
- Using URL : https://www.facebook.com/search/top/?q=Fname%20Lname
- Example: https://www.facebook.com/search/top/?q=Debasis%20Bhattacharya



Information Gathering: Facebook

- Birthday
- Age
- Gender
- Work Background
- Location
- Family Members
- Relationship Status
- Interests/ Likes
- Education
- Photos
- Geolocation Information
- User Network
- Details about user
- Life Events
- Phone Numbers
- Email

Employment and Employees Search using Facebook URLs

- Current/Past Employees
- https://www.facebook.com/search/str/bhattacharya/users-named/str/University-of-Hawaii-Maui-College/pages-named/employees/present/intersect
- https://www.facebook.com/search/str/University-of-Hawaii-Maui-College/pages-named/employees/present
- https://www.facebook.com/search/str/bhattacharya/users-named/str/Microsoft/pages-named/employees/past/intersect
- https://www.facebook.com/search/str/debasisb%20bhattacharya/users-named/str/Microsoft/pages-named/employees/past/intersect

Location Search Using Facebook URLs

- https://www.facebook.com/search/str/hawaii/pages-named/residents/present/str/debasis%20bhattacharya/users-named/intersect
- https://www.facebook.com/search/str/hawaii/pages-named/residents/present
- https://www.facebook.com/search/str/hawaii/pages-named/residents/present/str/faculty/pages-named/employees/present/intersect
- https://www.facebook.com/search/people/?q=bhattacharya%20hawaii
- https://www.facebook.com/search/people/?q=bhattacharya%20hawaii%20faculty

Age Search based on Facebook URLs

- People called “Bhattacharya” between ages 30 and 60
  - https://www.facebook.com/search/str/bhattacharya/users-named/str/30/60/users-age-2/intersect
- People called “Bhattacharya” between 30 and 60 and who live in Hawaii
  - https://www.facebook.com/search/str/bhattacharya/users-named/str/30/60/users-age-2/str/hawaii/pages-named/residents/present/intersect
- People who are 22 years old named "John Smith"
  - https://www.facebook.com/search/str/John%20Smith/users-named/str/22/users-age-1/intersect
- People named "Tim Smith" who were born between 1990 and 1999
  - https://www.facebook.com/search/str/tim%20smith/users-named/1999/date/1990/date/users-born-2/intersect

Likes Search using Facebook URLs

- https://www.facebook.com/search/str/star%20wars/pages-named/likers
- https://www.facebook.com/search/str/star%20wars/pages-named/likers/str/acdc/pages-named/likers/intersect
- https://www.facebook.com/search/str/university-of-hawaii/pages-named/students/str/acdc/pages-named/likers/intersect
- https://www.facebook.com/search/str/apple/pages-named/employees/str/university-of-hawaii/pages-named/likers/intersect
- https://www.facebook.com/search/people/?q=vegas%20hawaii%20kimo

Places Visited, Language, and Gender: Merrie Monarch FB

- Places Visited - https://www.facebook.com/Merrie-Monarch-Festival-185599409199/
  - https://www.facebook.com/search/str/ merrie%20monarch/pages-named/visitors
  - https://www.facebook.com/search/str/ merrie%20monarch /pages-named/visitors/str/hawaii/pages-named/residents/present/intersect
  - https://www.facebook.com/search/str/merrie%20monarch/pages-named/visitors/str/40/65/users-age-2/intersect
- Language
  - https://www.facebook.com/search/str/hawaiian/pages-named/speakers/str/hawaii/pages-named/residents/present/intersect
  - https://www.facebook.com/search/str/ merrie%20monarch/pages-named/visitors/str/hawaiian/pages-named/speakers/intersect
- Gender
  - https://www.facebook.com/search/str/ merrie%20monarch/pages-named/visitors/males/intersect

Types of Searches that we conducted

- People Named
- People who work/worked at ___
- People who like ___
- People who live in ____
- People who visited___
- School attended___

- People named ___ and like ___
- People who live in __ and like __

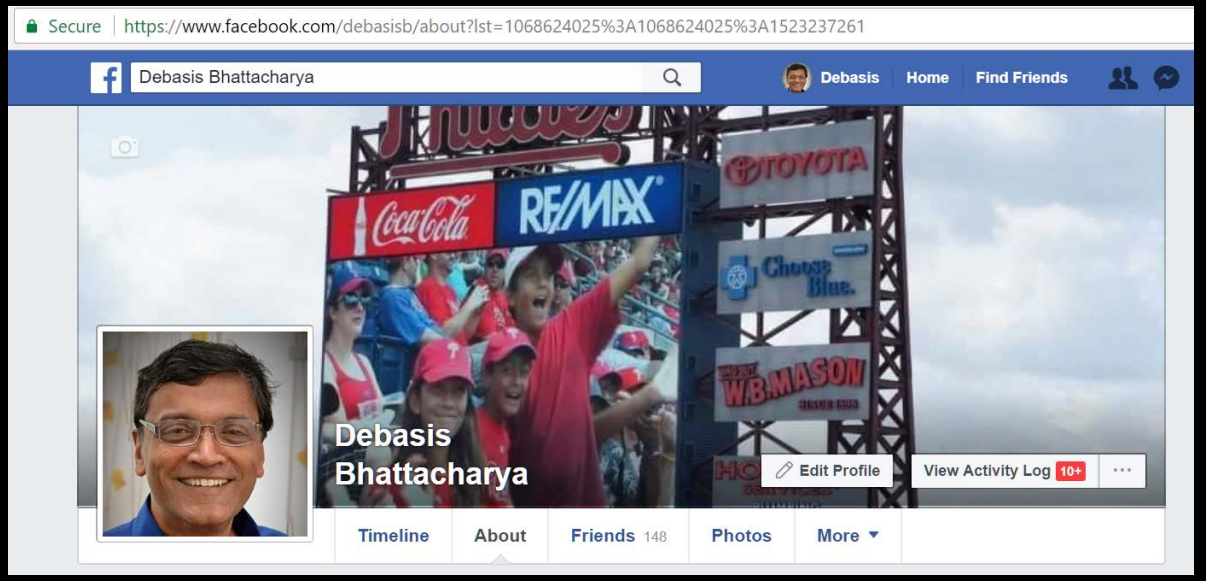
- Etc…

Searching for an email and telephone numbers on Facebook

- We can also use Facebook to find and confirm emails and telephone numbers.
- Type in the targets name into forgot password.
- Then find the targets profile.
- It will tell you the email service as well as the first and last letter of the email.
- In many cases, we can reverse engineer or guess the email.
- Can also tell us the last 2 digits of the phone number. Some sites, like people finder, will give us 7 and if we have the last 2, that means we are only missing 1 number. 🤑

Finding a users Facebook ID….

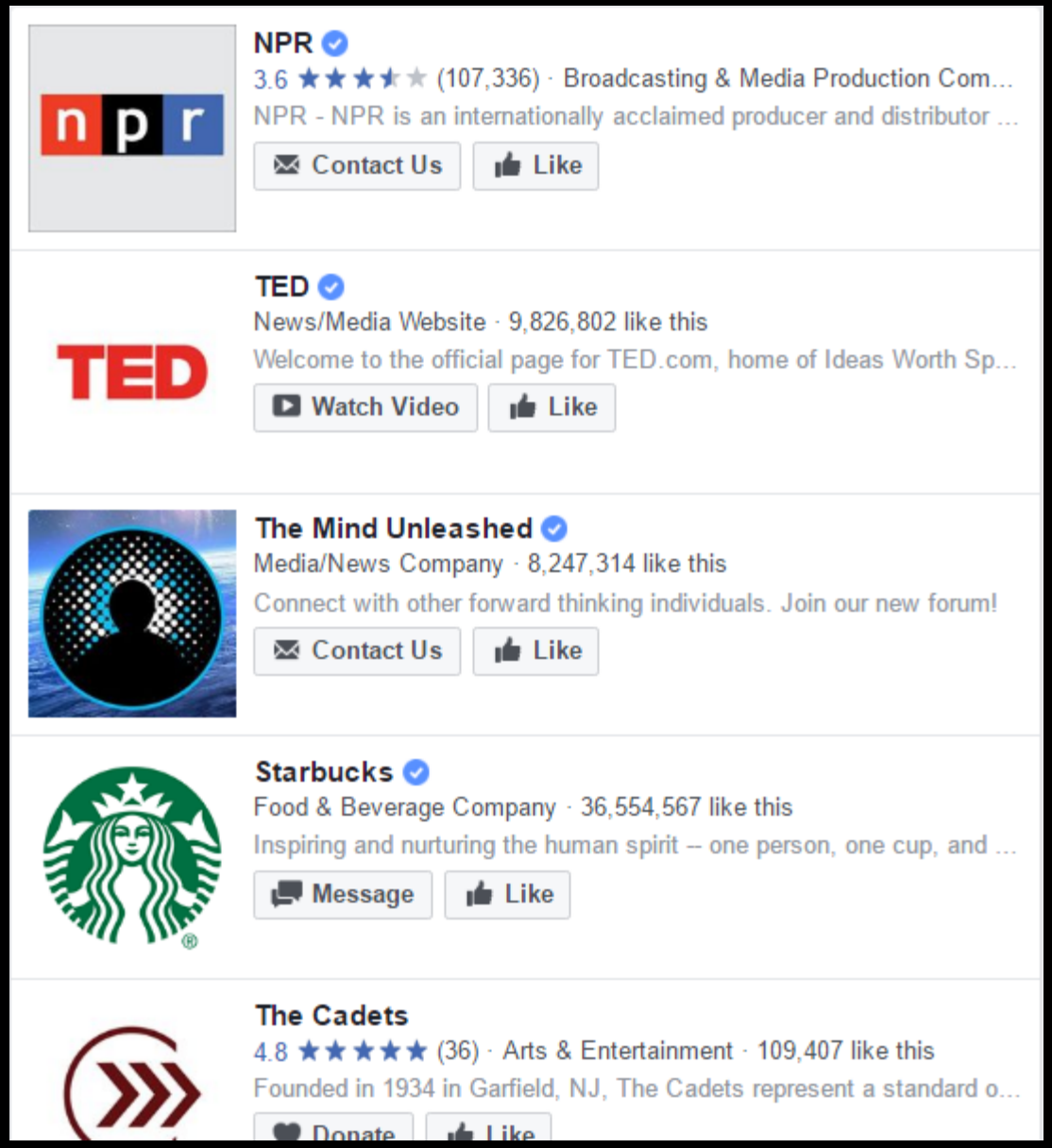
- Number of ways
  - Go to profile, go to About tab
  - Look in Facebook URL for the contents between %3APROFILE_ID%3A
  - https://www.facebook.com/debasisb/about?lst=1068624025%3A1068624025%3A1523237261



- https://www.facebook.com/search/profileID/places-visited
- https://www.facebook.com/search/profileID/places-liked
- https://www.facebook.com/search/profileID/pages-liked
- https://www.facebook.com/search/profileID/photos-by
- https://www.facebook.com/search/profileID/photos-of
- https://www.facebook.com/search/profileID/photos-commented
- https://www.facebook.com/search/profileID/videos
- https://www.facebook.com/search/profileID/videos-of
- https://www.facebook.com/search/profileID/videos-liked
- https://www.facebook.com/search/profileID/videos-commented
- https://www.facebook.com/search/profileID/apps-used
- https://www.facebook.com/search/profileID/friends
- https://www.facebook.com/search/profileID/events
- https://www.facebook.com/search/profileID/events-joined
- https://www.facebook.com/search/profileID/stories-by
- https://www.facebook.com/search/profileID/stories-commented
- https://www.facebook.com/search/profileID/stories-tagged
- https://www.facebook.com/search/profileID/groups
- https://www.facebook.com/search/profileID/relatives

Common Results

- https://www.facebook.com/search/profileID/pages-liked/profileID/pages-liked/intersect
- https://www.facebook.com/search/profileID/pages-liked/profileID/pages-liked/profileID/pages-liked/intersect

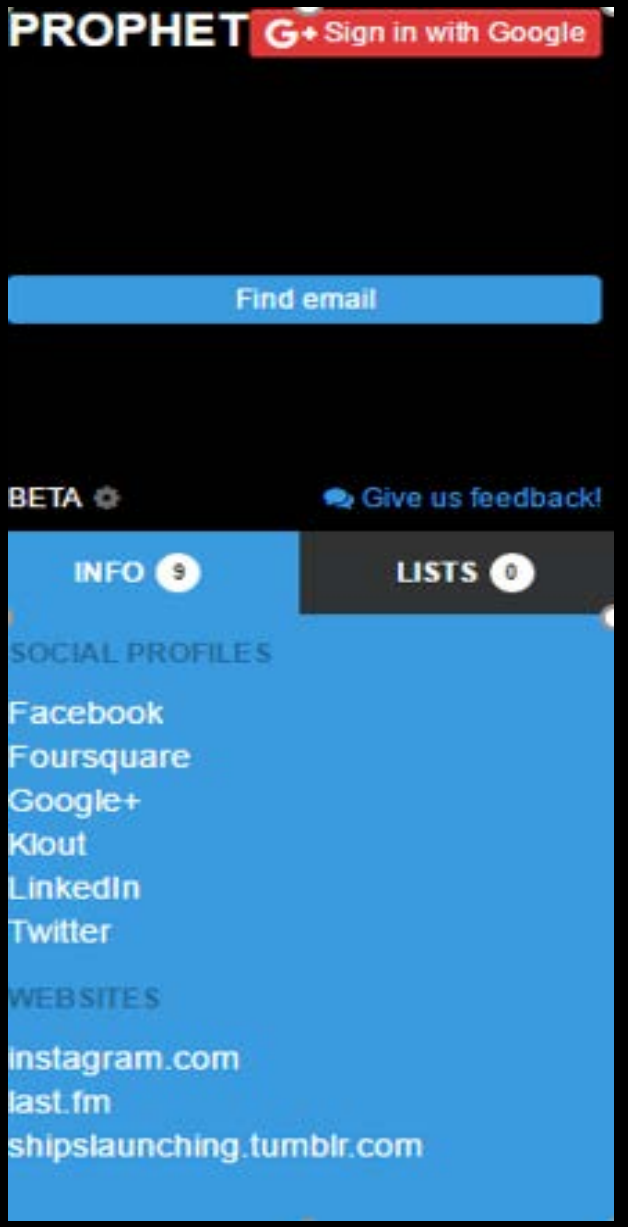


How I've used Twitter…

- Twitter can be a great place to find additional information about out target.
- However, it should be noted that often times, twitter users can be a little bit more complex to find because users are allowed to change his/her twitter handle.
- There are additional trips and tricks to searching twitter, such as using twitter's advanced search options.
- You can even type in the target's full name on google and a location +twitter and you might be able to get a match.
- In addition, we can also find targets sometimes through the analysis of hashtags.

Prophet

- Monitors the social networks that are associated with an individual
- Individual must use that social networking site in conjunction with multiple sites
- Can see social profiles associated with account, as well as websites and lists…
- Works well with twitter, facebook, linkedin, and google+



How I've used Instagram…

- Find targets Instagram
- Find all prior names on Instagram with Google
- Helped me find connections to a secondary hidden Facebook account
- Helped me find more information on targets location and interests.

How I've used LinkedIn....

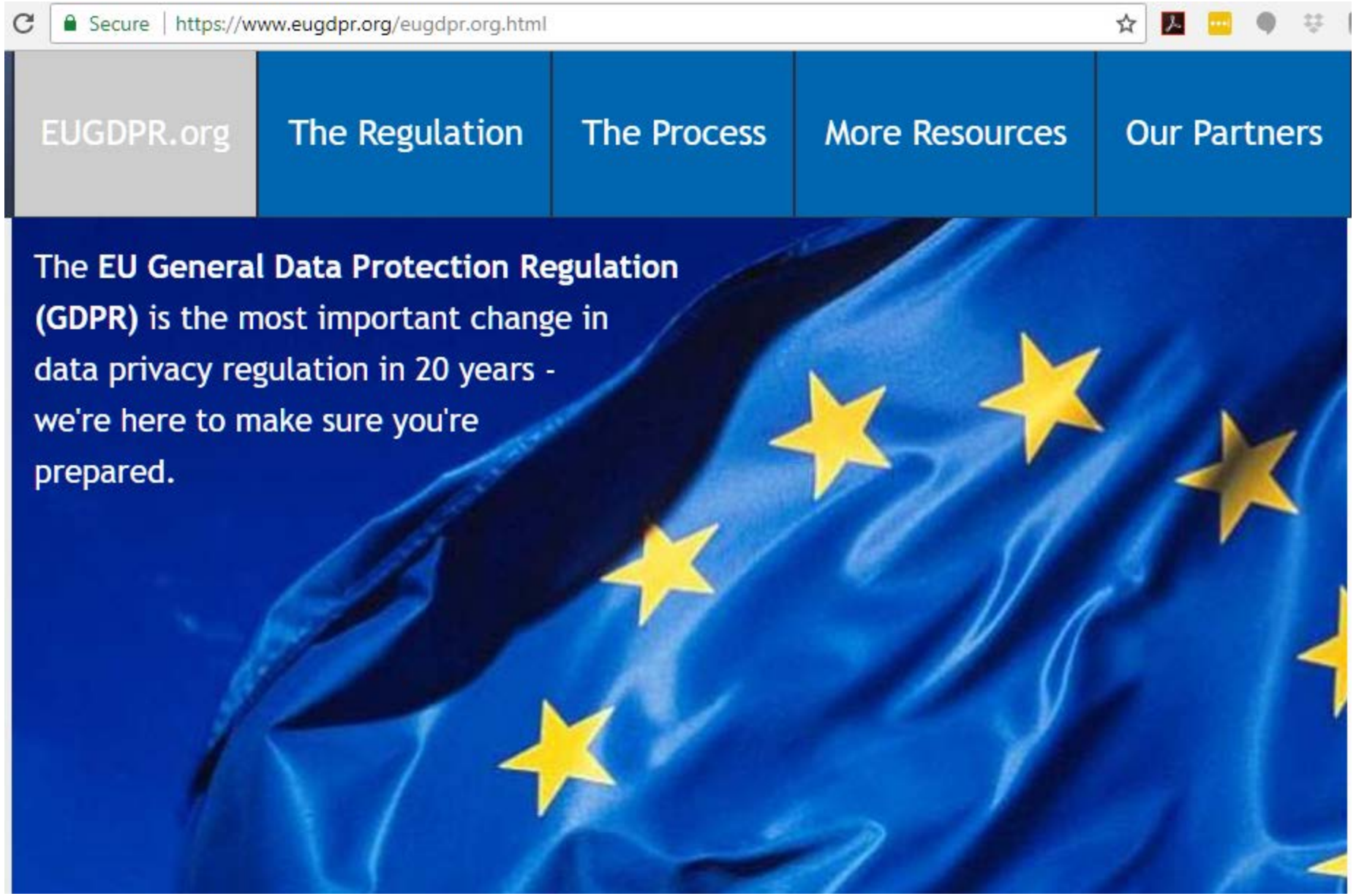
- Great for finding past employment
- Also great for finding professional connections
- Can get a lot of information from LinkedIn
  - Educational History
  - Work History
  - Volunteer work
  - Publications
  - Likes/Dislikes
  - Certifications, etc.
  - Emails/Contact Information...

A word on protecting your privacy…

- Always use the strictest privacy settings
- Never…EVER…geotag (and if possible, don't let anyone else geotag you)
- Keeps likes/interests to yourself
- Do not make connections public
- Limit photographs made public
- Know that when you post on public pages…those can be seen by others
- Know that old posts are archived and can be viewed again…especially if they were public

Spotting a fictitious profile…

- Account was made recently 2015, 2016, 2017.
- Account has no history published for earlier years, but Facebook says they have been a member since 2009, etc.
- Most fake accounts have 1 image or no real profile photo of the person. Some may only have a select few photos over a long span of time. A well seasoned user would have more photos posted over a long period of time. A fake account may have 7-10 photos posted on the same day.
- User has very few friends in common and or friends in general.
- There is little to no interaction on their page with friends, no comments, likes or responses over their long time line.
- Profile picture seems to good to be true, that hot model added you today! They even messaged you and are interested in you!
- When in doubt use reverse image search. Take their image and see if it is a real person or not.
- When in doubt deny, deny, deny.


Secure | https://www.eugdpr.org/eugdpr.org.html
EUGDPR.org
The Regulation
The Process
More Resources
Our Partners
The EU General Data Protection Regulation (GDPR) is the most important change in data privacy regulation in 20 years - we're here to make sure you're prepared.

Increased Territorial Scope (extra-territorial applicability)

Arguably the biggest change to the regulatory landscape of data privacy comes with the extended jurisdiction of the GDPR, as it applies to all companies processing the personal data of data subjects residing in the Union, regardless of the company's location. Previously, territorial applicability of the directive was ambiguous and referred to data process 'in context of an establishment'. This topic has arisen in a number of high profile court cases. GDPR makes its applicability very clear - it will apply to the processing of personal data by controllers and processors in the EU, regardless of whether the processing takes place in the EU or not. The GDPR will also apply to the processing of personal data of data subjects in the EU by a controller or processor not established in the EU, where the activities relate to: offering goods or services to EU citizens (irrespective of whether payment is required) and the monitoring of behaviour that takes place within the EU. Non-Eu businesses processing the data of EU citizens will also have to appoint a representative in the EU.

Penalties

Under GDPR organizations in breach of GDPR can be fined up to 4% of annual global turnover or €20 Million (whichever is greater). This is the maximum fine that can be imposed for the most serious infringements e.g.not having sufficient customer consent to process data or violating the core of Privacy by Design concepts. There is a tiered approach to fines e.g. a company can be fined 2% for not having their records in order (article 28), not notifying the supervising authority and data subject about a breach or not conducting impact assessment. It is important to note that these rules apply to both controllers and processors -- meaning 'clouds' will not be exempt from GDPR enforcement.

Consent

The conditions for consent have been strengthened, and companies will no longer be able to use long illegible terms and conditions full of legalese, as the request for consent must be given in an intelligible and easily accessible form, with the purpose for data processing attached to that consent. Consent must be clear and distinguishable from other matters and provided in an intelligible and easily accessible form, using clear and plain language. It must be as easy to withdraw consent as it is to give it.

Data Subject Rights

Breach Notification

Under the GDPR, breach notification will become mandatory in all member states where a data breach is likely to "result in a risk for the rights and freedoms of individuals". This must be done within 72 hours of first having become aware of the breach. Data processors will also be required to notify their customers, the controllers, "without undue delay" after first becoming aware of a data breach.

Right to Access

Part of the expanded rights of data subjects outlined by the GDPR is the right for data subjects to obtain from the data controller confirmation as to whether or not personal data concerning them is being processed, where and for what purpose. Further, the controller shall provide a copy of the personal data, free of charge, in an electronic format. This change is a dramatic shift to data transparency and empowerment of data subjects.

Right to be Forgotten

Also known as Data Erasure, the right to be forgotten entitles the data subject to have the data controller erase his/her personal data, cease further dissemination of the data, and potentially have third parties halt processing of the data. The conditions for erasure, as outlined in article 17, include the data no longer being relevant to original purposes for processing, or a data subjects withdrawing consent. It should also be noted that this right requires controllers to compare the subjects' rights to "the public interest in the availability of the data" when considering such requests.

Data Portability

GDPR introduces data portability - the right for a data subject to receive the personal data concerning them, which they have previously provided in a '*commonly use and machine readable format*' and have the right to transmit that data to another controller.

Privacy by Design

Privacy by design as a concept has existed for years now, but it is only just becoming part of a legal requirement with the GDPR. At it's core, privacy by design calls for the inclusion of data protection from the onset of the designing of systems, rather than an addition. More specifically - '*The controller shall, implement appropriate technical and organisational measures, in an effective way - in order to meet the*