March 11th

Monday, March 11, 2019   2:44 PM

Important Reading Due Today: Black Box Society, k-anonymity, Differential Privacy
Reading Response: https://docs.google.com/document/d/1298QLbkk7m124l-r-VXx3MAeiling4iEsFfaPVttI9U/edit

Privacy: Big Picture, Concepts, and Ethical Theory

Harvard Law Review and privacy
- They start by stating that the right to privacy is an old and established rule, but is important to define the nature of these protection as society changes
- Political, social, and economic changes change the nature of these laws
  - In the old days it was physical -> trespassing, property
  - Then right to property and right to freedom (literally not being physically trapped)
  - Then right to spiritual nature. Our values, feeling, intellect.
  - The scope continued to broaden. Now right to life means an enjoyable life. The right to be left alone, and property has grown to encompass all types of property - tangible or not
- Transparency as racism
  - People have a strong privacy interest in their criminal history. Aka preventing that information from becoming public so that it cannot be used against them (particularly after they have served their time) as it is well known that people with a criminal history have a hard time integrating into society even after rehabilitation because of their record
  - Because African Americans are disproportionately convicted of crimes, the transparency of criminal information hurts them more than other groups.

Big Data and Consumer Privacy
- "Big Data" is a nickname for enterprises that collect, analyze, package, and sell data.
- Re-identification of supposedly anonymous data is a large concern

Understanding ownership and privacy of genetic Data
By Julian Segert

Anonymity: What is it and technical solutions
- Egosearching: searching for self
  - Browser can find out who you are based on how much you search for yourself
- Anonymous is not anonymous
  - Harvard Sophomore Charged in Bomb Threat
  - Freshman wanted to get out of final exam. Made a Voip phone call to police and used tor. However, when the call was made only one person was using tor: him. Therefore he was not anonymous
- If you live in a more rural area you are more uniquely identifiable by your zip code. 80% of people are uniquely identifiable by DOB, gender, and zip code
- Many times strategies like this can be used to de-anonymize data that is supposed to be private
  - Linking data between anonymous sources or other records (public records)
- Releasing Data?
  - Be aware of risks and raise awareness with teams
- A piece of data provides k anonymity if a piece of data cannot distinguish a person form k-1 individuals
- K-anonymity

- ○ A property of a data set. Data is obscured so that there is no unique piece of data in the set
- Differential privacy
  - ○ Introducing a controlled amount of noise so that everyone in the set has plausible deniability.
  - ○ Example: yes no question: half of the users are asked to provide honest answers, 1/4th are told to say no, 1/4th are told do say yes. Because proportion of fake answers is 50/50 the "real" proportion can be found. Yet any one user could have said the honest or dishonest answer.