Privacy
Lecture 5-2

Computers & Society (CPSC 430)
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https://www.cs.ubc.ca/~kevinlb/teaching/cs430
Ways Information Becomes Public

- Rewards or loyalty programs
- Body scanners
- Digital video recorders
- Automobile “black boxes”
- Enhanced 911 service
- RFIDs
- Implanted chips
- Cookies
- Spyware

...can you think of others?
Information Privacy

“It should be illegal for shopping malls to install cameras for tracking customer behavior.”

Section 101

A total of 48 voter(s) in 962 hours
- 2 votes (4%) - Strongly agree
- 10 votes (21%) - Agree
- 8 votes (17%) - Neutral
- 22 votes (46%) - Disagree
- 6 votes (13%) - Strongly disagree

Section 102

A total of 37 voter(s) in 962 hours
- 3 votes (8%) - Strongly agree
- 14 votes (38%) - Agree
- 5 votes (14%) - Neutral
- 14 votes (38%) - Disagree
- 1 vote (3%) - Strongly disagree
Data Mining

• **Data mining**
  – Searching for patterns or relationships in one or more databases
  – This info typically provided by the customer for another purpose

• **Many internet services provided as an opportunity to gather valuable data**
  – Google; Facebook; free online courses

• **Also performed by the government**
  – Efforts to detect terrorism via phone, bank, travel records
  – Tax audits

• **Questions:**
  – Ownership: do you have any rights over info about transactions in which you participated?
  – Ethics: what data mining activities are unethical? Which are ethical?
  – Does it make a difference whether DM is opt-in or opt-out?
  – At what point does DM become “creepy”?
  – Should we worry about ending up in a “personalization bubble”?
"On our watch"

This Italian movie, released in 2021, explores (satirically) the dangers of machine learning and data mining in the hands of powerful tech giants.

https://www.youtube.com/watch?v=u50KHz1PXfM
Open Source

• A variety of licenses. Some typical ingredients:
  – No restrictions preventing others from selling or giving away software
  – Source code included in distribution
  – No restrictions preventing others from modifying source code
  – No restrictions regarding how people can use software
  – Same rights apply to everyone receiving redistributions of the software (copyleft)

• GNU Project (Richard Stallman, 1984-)
  – Goal: Develop open-source, Unix-like operating system
  – Most components developed in late 1980s

• Linux
  – Linus Torvalds wrote Unix-like kernel in 1991
  – Combined with GNU components to make an OS
  – putting pressure on Microsoft, Apple, and companies selling proprietary versions of Unix
Benefits and Drawbacks of Open Source

• Benefits
  – Gives everyone opportunity to improve program
  – New versions of programs appear more frequently
  – Eliminates tension between obeying law and helping others
  – Programs belong to entire community
  – Shifts focus from manufacturing to service

• Drawbacks
  – Without critical mass of developers, quality can be poor
  – Without an “owner,” incompatible versions can arise
  – Relatively weak graphical user interfaces
  – Poor mechanism for stimulating innovation (no companies will spend billions on new programs)
Creative Commons

• Under current copyright law, eligible works are copyrighted the moment they are created
• No copyright notice does not mean it’s ok to copy
• Must contact people before using work
• That slows down creative reuse
• Free Creative Commons license indicates
  – Which kinds of copying are ok
  – Which rights are being retained
• Flickr and Magnatune two well-known sites using Creative Commons licenses
Safe Software Development

• Reverse engineering okay
• Companies must protect against unconscious copying
• Solution: “clean room” software development strategy
  – Team 1 analyzes competitor’s program and writes specification
  – Team 2 uses specification to develop software
• Interestingly, same development strategies also used to ensure that open source licenses don’t “infect” commercial software