Lecture 19: Data privacy

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Learning objectives

- Understand what are the privacy laws at the federal level in Canada and provincial level in BC
- What are/are not personal identifiable information
- Be aware of situations at workplace where data privacy might be violated

Why do we care about data privacy?

Cambridge Analytica, a political consulting firm, improperly obtained data on millions of Facebook users without their consent.

The data was used for targeted political advertising, influencing public opinion during elections.

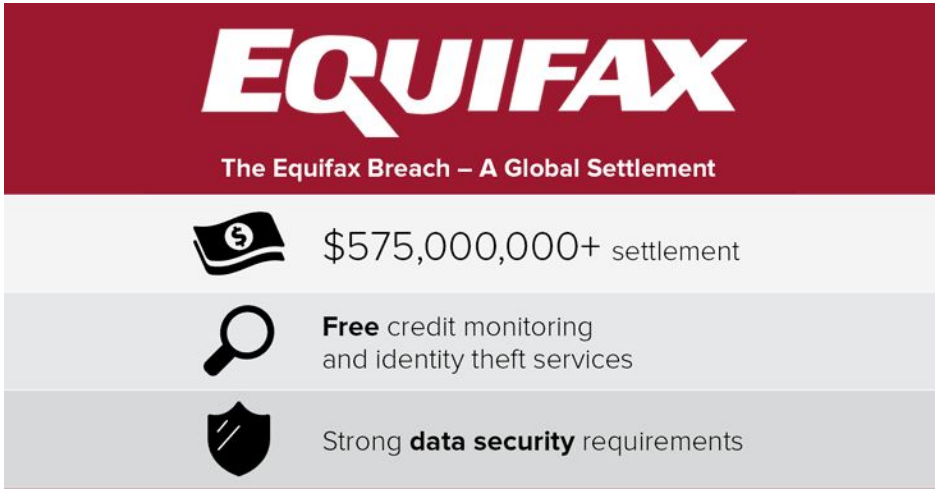


2016

Facebook was fined **$5 billion by the Federal Trade Commission (FTC)**

Why do we care about data privacy?

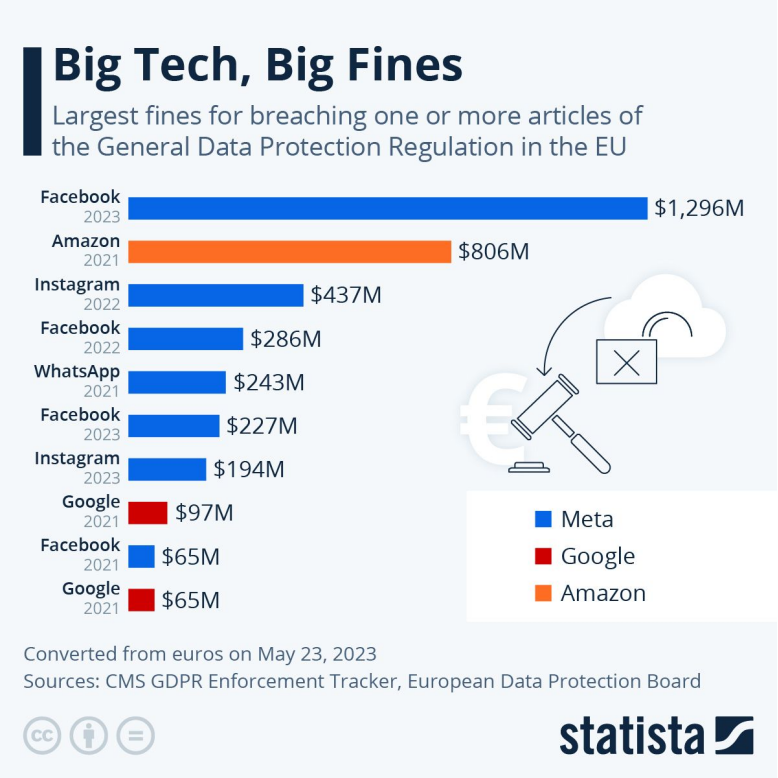
Equifax, one of the largest credit reporting agencies in the US, suffered a data breach exposing the sensitive personal information of **147 million people**. Compromised data included Social Security numbers, birth dates, and addresses.



2017

Why do we care about data privacy?

In 2023, Meta faced a record-breaking **€1.2 billion** fine from the Irish Data Protection Commission (DPC) under GDPR. This was due to transferring EU users' data to the U.S. without sufficient privacy safeguards, despite ongoing scrutiny



Why do we care about data privacy?

TikTok has faced scrutiny and legal actions over alleged data collection practices, especially regarding its collection of data from minors. Concerns include the extent of data sent to servers overseas and the app's privacy policies



2024 (on going)

What is data privacy

Data Privacy involves managing personal data responsibly, ensuring it is handled, stored, and shared in ways that protect individuals' rights.

Personal Data: Information that can identify an individual directly (name, ID) or indirectly (IP address, location data).

Sensitive Data: A subset of personal data, including health, biometric, or financial data that requires extra protection.

Personally Identifiable Information

Which of the following are considered personal data?
(Select all that apply)

A) An individual’s name

B) IP address of a device

C) Business contact information

D) Social Security Number

E) Anonymized health research data with no identifying information

F) Email address associated with a person

G) Postal code

The definition of personal information differs somewhat under PIPEDA or the *Privacy Act* but generally, it can mean information about your:

- race, national or ethnic origin,
- religion,
- age, marital status,
- medical, education or employment history,
- financial information,
- DNA,
- identifying numbers such as your social insurance number, or driver's licence,
- views or opinions about you as an employee.

https://www.priv.gc.ca/en/privacy-topics/privacy-laws-in-canada/02_05_d_15/

What is generally ***not*** considered personal information can include:

- Information that is not about an individual, because **the connection with a person is too weak or far-removed** (for example, a postal code on its own which covers a wide area with many homes)
- Information about an **organization such as a business.**
- Information that has been rendered **anonymous,** as long as it is not possible to link that data back to an identifiable person
- Certain information about **public servants** such as their name, position and title
- A **person's business contact information** that an organization collects, uses or discloses for the sole purpose of communicating with that person in relation to their employment, business or profession.
- **Government information**. Occasionally people contact us for access to government information. This is different from personal information. For access to government information, contact the Information Commissioner of Canada.

https://www.priv.gc.ca/en/privacy-topics/privacy-laws-in-canada/02_05_d_15/

Federal privacy laws

Canada has two federal privacy laws that are enforced by the Office of the Privacy Commissioner of Canada:

- the *Privacy Act*, which covers how the federal government handles personal information;
- the *Personal Information Protection and Electronic Documents Act* (PIPEDA), which covers how businesses handle personal information.

Privacy Act

The *Privacy Act* relates to a person's right to access and correct personal information that the Government of Canada holds about them

The *Privacy Act* only applies to federal government institutions

- old age security pensions
- employment insurance
- border security
- federal policing and public safety
- tax collection and refunds.

PIPEDA

Personal Information Protection and Electronic Documents Act (PIPEDA) sets the ground rules for how private-sector organizations collect, use, and disclose personal information in the course of for-profit, commercial activities across Canada

What does PIPEDA apply to?

PIPEDA generally applies to personal information held by private sector organizations that are not federally-regulated

What does PIPEDA not apply to?

PIPEDA does not apply to organizations that do not engage in commercial, for-profit activities. (e.g., non-profit, charity, political associations)

Provincial privacy laws

Some provinces have private-sector privacy laws that may apply instead of PIPEDA. This means that those laws apply instead of PIPEDA in some cases. These provinces are:

- Alberta
- British Columbia
- Québec.

FIPPA - Public sectors

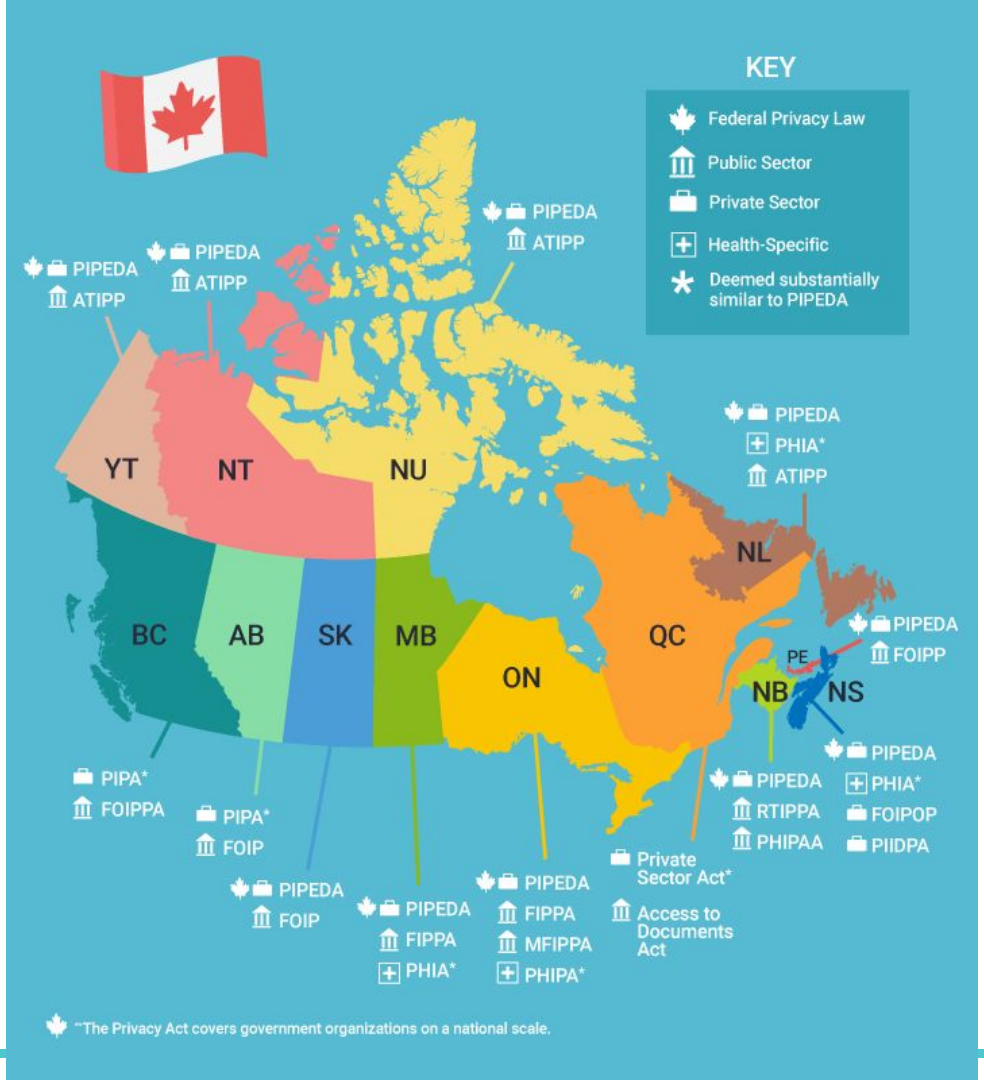
The **British Columbia Freedom of Information and Protection of Privacy Act (FIPPA)** is legislation that governs how public bodies in British Columbia collect, use, and disclose personal information.

https://www.oipc.bc.ca/about/legislation/

PIPA - Private sectors

British Columbia's ***Personal Information Protection Act*** applies to any private sector organization (such as a business or corporation, union, political party, and not-for-profit) that collects, uses, and discloses the personal information of individuals in BC.

https://www.oipc.bc.ca/about/legislation/


KEY
Federal Privacy Law
Public Sector
Private Sector
Health-Specific
Deemed substantially similar to PIPEDA
PIPEDA
ATIPP
PIPEDA
ATIPP
PIPEDA
ATIPP
YT
NT
NU
PIPEDA
PHIA*
ATIPP
NL
BC
AB
SK
MB
ON
QC
PE
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FOIPPA
PIPA*
FOIP
PIPEDA
FOIP
PIPEDA
FIPPA
PHIA*
PIPEDA
FIPPA
MFIPPA
PHIPA*
Private Sector Act*
Access to Documents Act
PIPEDA
RTIPPA
PHIPAA
PIPEDA
PHIA*
FOIPOP
PIIDPA
*The Privacy Act covers government organizations on a national scale.

Overview

Aspect	Federal Privacy Act	PIPEDA	FIPPA	PIPA
Applies To	Federal government institutions in Canada	Private-sector organizations across Canada	Public-sector organizations in specific provinces (e.g., BC, Ontario)	Private-sector organizations in certain provinces (e.g., BC, Alberta)
Jurisdiction	Canada-wide, limited to federal institutions	Canada-wide; except in provinces with substantially similar laws (BC, AB, QC)	Provincial (BC, Ontario, etc.)	Provincial (BC, Alberta)
Purpose	Protect personal information held by federal bodies	Regulate personal data handling in commercial activities	Protect personal data held by provincial public bodies	Protect personal information in the private sector
Enforcement	Federal Privacy Commissioner	Federal Privacy Commissioner	Provincial Privacy Commissioners s	Provincial Privacy Commissioners

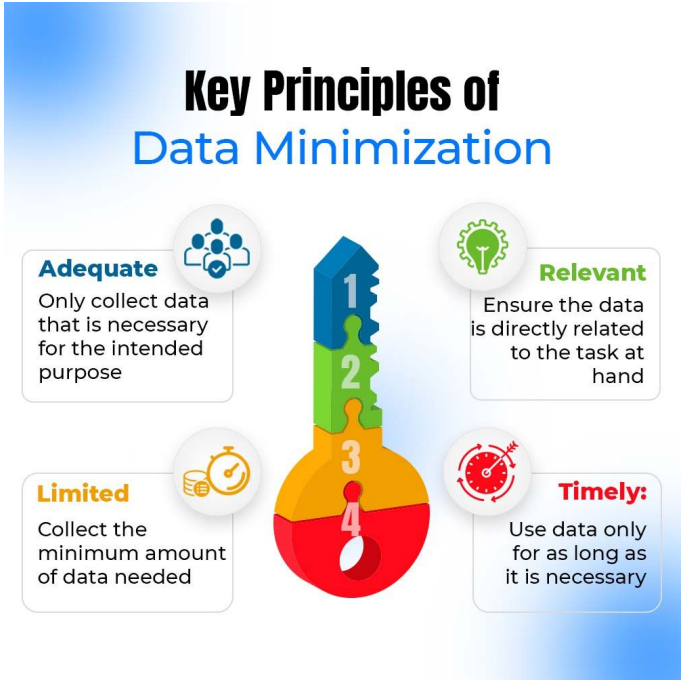
Which of the following statements accurately describe the scope and application of the Federal Privacy Act, PIPEDA, FIPPA, and PIPA in Canada? (Select all that apply)

https://join.iclicker.com/IZDV

- A) The Federal Privacy Act applies to private-sector organizations across Canada.
- B) PIPEDA applies to private-sector organizations engaged in commercial activities across Canada, with some exceptions for provinces with their own privacy laws.
- C) FIPPA applies to public-sector organizations within specific provinces, such as British Columbia and Ontario.
- D) PIPA applies to private-sector organizations in provinces like British Columbia and Alberta.
- E) PIPEDA restricts cross-border data transfers, requiring all personal data to be stored within Canada.

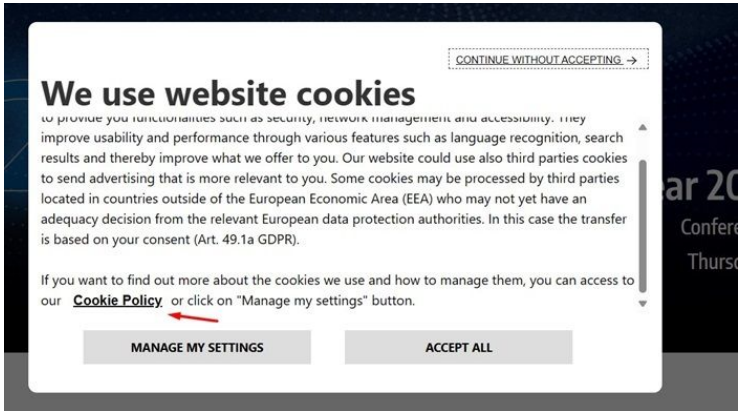
Takeaways - Data minimization

Collect only the data necessary for a specific purpose. Laws like **PIPEDA**, **FIPPA**, and the **GDPR** emphasize **data minimization**, meaning only essential data should be collected, and extraneous information should be avoided



Takeaways - Informed consent

Data privacy laws like **PIPEDA** and **GDPR** require that individuals provide explicit or informed consent for the collection, use, and sharing of their personal data



Takeaways - Data security

Data scientists must implement **strong security measures** to protect personal data, especially when handling sensitive or classified information.

What measures do you think we should use for data security?

https://join.iclicker.com/IZDV

Takeaways - Cross border data transfer

- Data protection laws like **GDPR** and **PIPEDA** impose restrictions on the cross-border transfer of personal data.
- Putting in place contractual safeguards with the third party to ensure that data is adequately protected while being processed abroad.
- Organizations are also required to inform individuals that their data may be transferred outside Canada



Discuss with your classmate

Which of the following activities might be a violation of data privacy and confidentiality agreement

A) Students save company data to their local drive
B) Students send login credentials (e.g., MongoDB) via WhatsApp
C) Students commit `credentials.json` to a public platform like GitHub
D) Students ask their classmates to help with the analysis by showing them the dataset
E) Students access the data server while being abroad without using a secure VPN
F) Students use public cloud storage for sharing anonymized data with the team
G) Students use unencrypted email to send analysis results containing sensitive data
H) Students run the analysis on a personal laptop that is not encrypted or password protected

Breach of Confidentiality: 3 Possible Consequences

1. Loss of reputation
2. Loss of employment
3. Criminal charges

Data privacy in the era of generative AI

The new Meta Ray-ban smart glasses





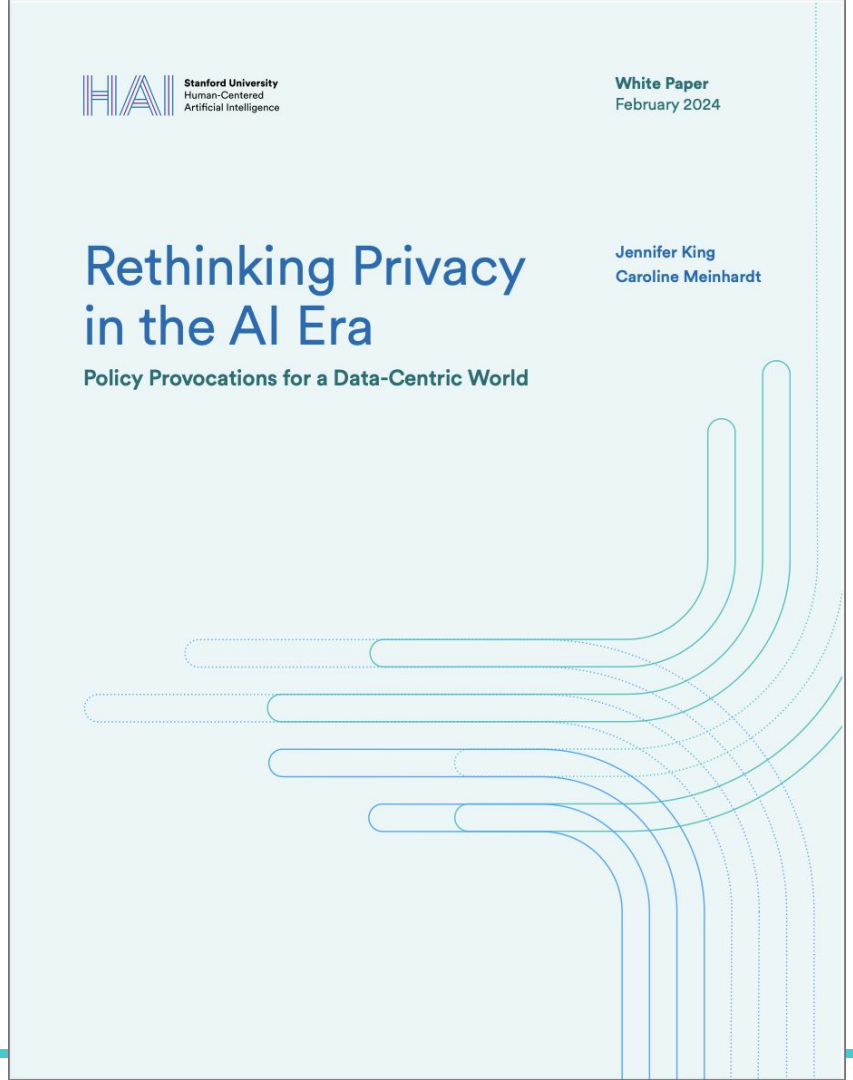
The Artificial Intelligence and Data Act (AIDA)



https://ised-isde.canada.ca/site/innovation-better-canada/en/artificial-intelligence-and-data-act

Resources

[Rethinking Privacy in the AI Era: Policy Provocations for a Data-Centric World]



Your homework

Watch this video: https://www.youtube.com/watch?v=9xjFsy9_HBs

Summarize 3 key takeaways from the talk on the privacy risks and challenges of generative AI

~ 500 words

