MSDS 640: Ethics, Privacy and Social Justice Issues
Ethics Lenses and Government Regulation
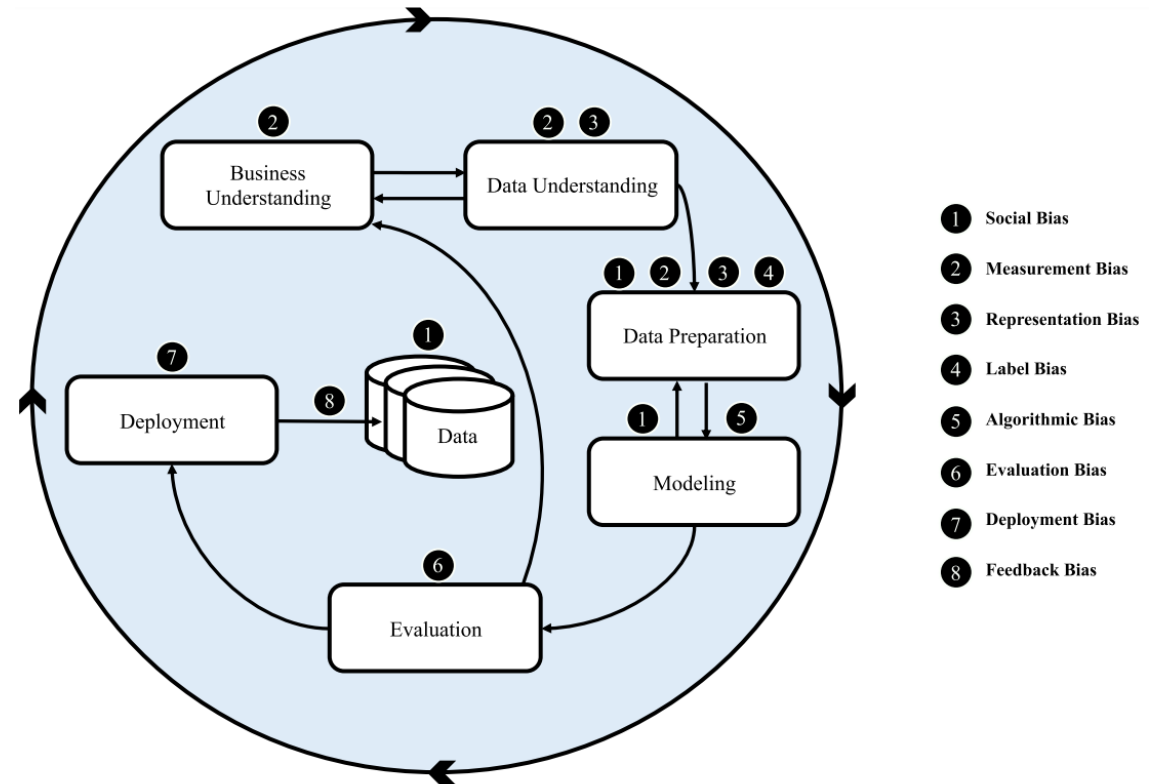
Week 3

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Last Week

- Data Science Project Life Cycle

- Privacy and Ethics concerns examples

https://www.sciencedirect.com/science/article/pii/S0148296322000881

Weekly Outline

- **Six Ethical Lenses**:
  - The Rights Lens
  - The Justice Lens
  - The Utilitarian Lens
  - The Common Good Lens
  - The Virtue Lens
  - and the Care Ethics Lens

- The intrinsic value of privacy
- Privacy regulatory models:
  - U.S bottom - up approach vs. EU top - down approach
- Fundamental Principles in Privacy Regulation:
  - Notice
  - Choice
  - Access

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Applied Ethics Framework

Identify the Ethical Issue

Get the Facts

Apply lenses and evaluate alternative actions

Choose action and evaluate it

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The Rights Lens

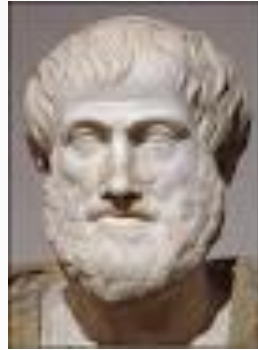18th-century thinker Immanuel Kant

Based on the individual's right to choose for herself or himself.

- The right to the truth

- The right of privacy

- The right not to be injured

- The right to what is agreed

Question: Does the action respect the moral rights of everyone?

Examples: User's right to access their data, Right to be forgotten in GDPR

Greek Philosopher
Aristotle

The Fairness or Justice Lens

Each person should be given their due and this is often seen as fair or equal treatment.

Question: How fair is an action? Does it treat everyone in the same way, or does it show favoritism and discrimination?

Examples: Algorithmic fairness in credit scoring, equal access to privacy tools

The Utilitarian Lens

Origins in the 19th century by Jeremy Bentham and John Stuart Mill

1. Identify the various courses of action available to us.

2. Ask who will be affected by each action and what benefits or harms will be derived from each.

3. Choose the action that will produce the greatest benefits and the least harm.
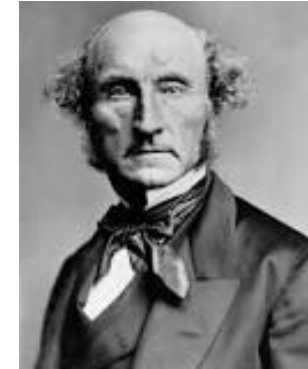
Question: How will this action impact everyone affected?

Example: Balance between data collection and privacy

The Common Good Lens

Origins to more than 2,000 years ago in the writings of Plato, Aristotle, and Cicero.

John Rawls defined the common good as "certain general conditions that are...equally to everyone's advantage."

Provide affordable health care, effective public safety, peace among nations, a just legal system, and an unpolluted environment.

Mutual concern for the shared interests of the community

Question: What serves the community's shared interests?
Example: Sharing of public data

The Virtue Lens

- There are certain ideals toward which we should strive, which provide for the full development of our humanity

- Practice thoughtful reflection on what kind of people we have the potential to become.

Virtues:

- Attitudes that enable us to be and to act in ways that develop our highest potential. Virtues are like habits and become characteristic of a person

Questions: What kind of person will I become if I do this?

Is this action consistent with my acting at my best?

Example: Diversity and inclusivity practices at organizations/workplaces

The Care Ethics Lens

(Newer approach developed as of 2021)

- Places value in relationships and the need to respond to individuals within the context of their circumstances

- Focuses on empathy to understand the interests, feelings, and attitudes of each stakeholder

- Embodies traits, such as compassion, generosity, and a concern for others

- Advocates for a holistic approach to addressing societal issues

Question: How can we be respectful of individuals and where they are coming from?

Example: providing customization for products depending on individual needs

Class Exercise: Ethical Scenarios
Only Choose One of the Scenarios

Scenario 1: AI Resume Screening Bias

I treats white and male job candidates better than other races/genders in resume-screening bias.

You are a technology ethics consultant hired by a major corporation that uses AI to screen job applications. Recent testing has revealed that the AI system shows a strong preference for applications from white male candidates, even when resumes from other demographics have equivalent or superior qualifications.

Sources:

https://www.geekwire.com/2024/ai-overwhelmingly-prefers-white-and-male-job-candidates-in-new-test-of-resume-screening-bias/

https://ojs.aaai.org/index.php/AIES/article/view/31748/33915

Scenario 2: AI-generated applications

Hiring Managers tend to reject AI-Generated job applications from job seekers.

A new survey by the CV Genius research team revealed that 80% of hiring managers dislike AI-generated cover letters and resumes, with 74% saying they can spot when AI has been used in a job application. Instead of AI, hiring managers prefer human-written applications and believe candidates who use AI come across as repetitive, generic, and lazy.

Sources:

https://www.msn.com/en-us/money/careersandeducation/hiring-managers-reject-ai-generated-job-applications-from-job-seekers/ar-AA1tidog

https://www.forbes.com/sites/bryanrobinson/2024/10/20/why-80-of-hiring-managers-discard-ai-generated-job-applications-from-career-seekers/

Class Exercise: Ethical Scenarios Task

Apply the ethics lens to analyze the above scenarios and answer the following questions.

1. Which ethical lens(es) resonated most strongly with you and why?

2. How might combining multiple ethical perspectives lead to better solutions?

3. What practical recommendations emerge from this multi-lens analysis?

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Issues with Data Anonymity

- Sale of medical data is commonplace and expensive

2020: NIH officials raise concerns about privacy

- link any dataset back to individual persons using 15 characteristics. The study was able to reidentify 99.98% of Americans based on characteristics, such as age, gender and marital status. Link

Potential solutions:

- Use synthetic data!

- Many applications don't need real data!

  - Self-driving cars

California Consumer Privacy Act (CCPA)

- Took effect in Jan 2020

- any California consumer is allowed to see all the available information on them.

- a full list of all the third parties that the company shares data with.

- the right to non-discrimination in terms of price or service when a consumer exercises a privacy right under CCPA.

- right to sue companies if the privacy guidelines are violated, even if there is no breach. Link

Colorado Privacy Act

rado Privacy Act (CPA)

- Signed in July, 2021. Went into effect in July of 2023

- Gives Colorado consumers:

  - "Right to access, delete, and correct personal data"

  - Opt out of the sale of personal data

Provide Colorado Consumers:

- Information about the collection and use of their data

- The ability to give consent before handling of sensitive data

Source: https://coag.gov/resources/colorado-privacy-act/

The Intrinsic Value of Privacy

- Is privacy a commodity that each individual, based on his or her preferences, can sell or rent in return for a service or product?

- Is privacy a basic human right that transcends commoditization, which must be protected at all costs?

Ludloff, M. E., & Craig, T. (2011). *Privacy and Big Data*. O'Reilly Media, Inc. Retrieved from https://learning.oreilly.com/library/view/privacy-and-big/9781449314842/ch03.html#a_open_parenthesis_very_close_parenthesi

Privacy Regulatory Models

Comprehensive Laws: govern the collection and use of personal information by public and private sectors

oversight body to ensure compliance

Sectoral Laws: favor specific sectoral laws that govern specific items, like video rental records or financial privacy

enforcement by regulatory agencies, federal and state statutes, and self-policing

Self-regulation: companies and industry bodies are expected to establish codes of practice and self-police

- Verisign

Consumer regulation: privacy protection is employed by the consumer through the use of digital privacy protection tools

Ex. Cookie blockers, encryptors for the secure transmission of email

Ludloff, M. E., & Craig, T. (2011). *Privacy and Big Data*. O'Reilly Media, Inc. Retrieved from https://learning.oreilly.com/library/view/privacy-and-big/9781449314842/ch03.html#privacy_regulatory_modelsmcomplimentary

U.S. Regulatory Model: Bottom - Up Approach

Healthcare

The Health Information and Portability Accountability Act (HIPAA)

The Personal Health Information Protection Act (PHIPA), issued in Canada

Financial Industry

The Gramm-Leach-Bliley (GLB) Act

The Sarbanes-Oxley Act (SOX)

Children under the age of 13

The Children's Online Privacy Protection Act (COPPA)

Digital Privacy

European Media Freedom Act (MFA) currently active (take full effect in August 2025) link

General Data Protection Regulation (GDPR, from the EU)

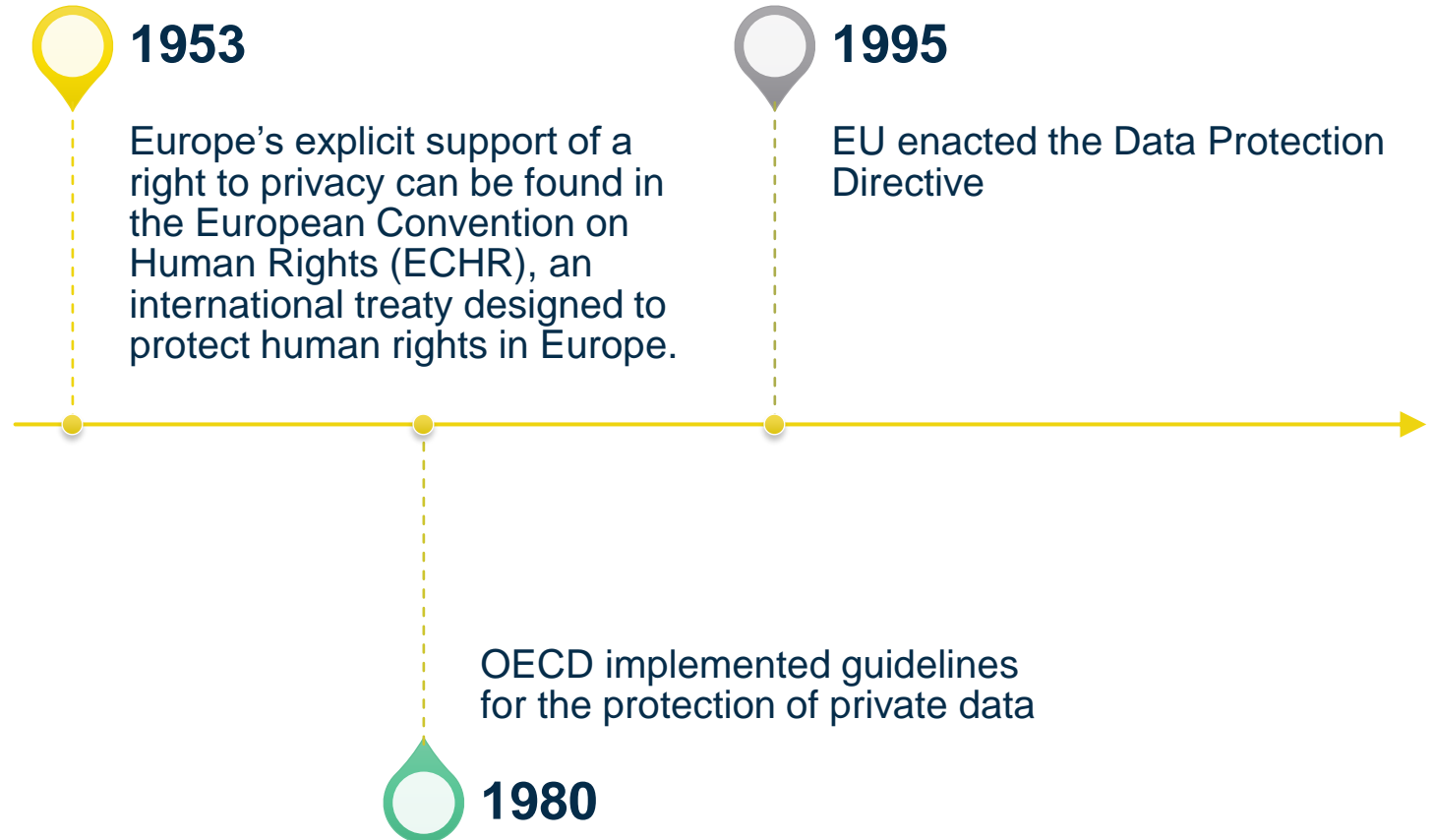The Privacy, Cryptography, and Security Guidelines, issued by the OECD

The Data Protection Directive, issued by the European Parliament and Council (E.C.)

The Data Protection Act, issued by the United Kingdom (U.K.)

The Personal Information Protection and Electronic Documents Act (PIPEDA), in Canada

The Privacy Act of 1974, in the United States

The European Union Model – a Top - Down Approach

1953

Europe's explicit support of a right to privacy can be found in the European Convention on Human Rights (ECHR), an international treaty designed to protect human rights in Europe.

1995

EU enacted the Data Protection Directive

OECD implemented guidelines for the protection of private data

1980

EU's Data Protection Directive of 1995

Collection Limitation.

Data Quality.

Purpose Specification.

Use Limitation.

Security Safeguards.

Openness.

Individual Participation.

Accountability.

Principles in Privacy Regulation: Notice

The entity collecting the data.

The uses to which the data will be put.

Potential recipients of the data.

The nature of the data collected and the means by which it is collected if not obvious

Whether the provision of the requested data is voluntary and the consequences of a refusal to provide the requested information.

The steps taken to ensure the confidentiality, integrity, and quality of the data.

Kalyvas, J. R., & Overly, M. R. (2014). *Big Data*. Auerbach Publications. Retrieved from https://proquest.safaribooksonline.com/book/databases/business-intelligence/9781466592377

Principles in Privacy Regulation: Choice

A right to know how consumer information is used and what information is shared with third parties

Opt-in and Opt-out options

Fair Credit Reporting Act (FCRA) prohibits certain uses and sharing of personal information without proper notice

Experian Equifax TransUnion

Principles in Privacy Regulation: Access

"an individual's ability to

(a) access data that a company has about the individual and

(b) require the company to correct inaccurate information or delete information not needed or properly held by the company."

Week 3 Assignment: Government Regulations Presentation

Paying attention to the best practices for Power Point presentations aimed at avoiding the "bullets to boredom" phenomenon, create a presentation that contains a title slide, introductory slide, the information from the items below, and a summary slide. Post the PPP to the week 3 Assignment dropbox and Week 4 Discussion. You'll have the option present in our weekly Zoom session in Week 4 which will constitute our Discussion for the week or record the presentation in advance

Choose one regulation related to data science. Provide the following information:

1. A description and overview

2. Include when it was established and why it was created

3. What industry it regulates, and any other pertinent information

4. What an organization in that industry must do to comply with the regulations, and how the regulations are enforced

5. Finally, discuss how it affect us as data scientists

Government Regulations Grading Rubric

Government Regulations Discussion Rubric

Criteria	Points
Introduction	10
Legal aspects of privacy with descriptions	20
Regulation described; Organization compliance and enforcement	50
Summary/conclusions	10
Screencast/presentation	10
Total Points	**100**

Conversation Theme

X (formerly Twitter), Facebook, and other social media sites engage in forms of moderation/censorship regularly. A famous example is when both X and Facebook banned Donald Trump from their platforms in January of 2021, but many other examples of censorship can be found on the platforms.

What are your thoughts on this, and how is data science related to it? Is their censorship/moderation generally reprehensible, or responsible? What sort of data science tools could be used to aid in social media moderation, and how would it work? Should there be government intervention or regulations related to social media censorship? Are there some examples of social media bans that make sense, and others that don't?

You don't have to answer all of the questions above - they are intended to get the discussion going.

Bringing data or charts to support your argument is highly encouraged.