



# **MSDS 640 Week 1: Introduction**

# Breakout Group (10 min)

We want to get to know you!

In a breakout group share with your classmates the following:

Then we'll introduce ourselves to the whole class.

1. Your contact information: name, email address, location, and time zone (phone number optional).
2. Your job title.
3. Hobbies, interests, and any other relevant information about yourself for the course.
4. Include a brief reflection on one or two of the [Ignatian Jesuit Values](#) (ethics, social justice, men/women for others, God in all things, and/or global awareness) and reflect on what Jesuit Values means to you as they relate to this course.

## MSDS 640: Ethics, Privacy and Social Justice Issues

- A writing- and analysis-focused course as opposed to technical
- Clear communication of ideas is important for everyone
- We'll learn about ethical concerns within data science and sometimes how to avoid them
- We'll implement Ethics Grand Rounds Case Study Approach (more details under *Ethics Rounds documents module* on worldclass)

# **FTE and readings each week**

- At a minimum, read the FTE each week, and try to skim some of the linked articles.
- There are lots of extra optional readings and videos. You do not have to read and watch everything linked in the FTE.

# A few notes on generative AI

- A useful tutorial on using generative AI
- I only want you to use it as a tool to generate ideas or as a research tool.
- If you ask an AI to create your complete assignment answer, and submit it as your own, it is likely I will know. You will end up with zero points.
- You will only have **one** opportunity during the course to resubmit an assignment for a reduced score.
- AI lies and does it remarkably well
- AI hallucinates sometimes...
- **If you do use it, make sure you cite it in your paper and include an appendix at the end of any assignment and include an explanation for how you used it, i.e. prompts you used to generate results with screenshots.**

Week	Readings	Graded Assignments or Assessments (Percentage)
1: Introduction to Ethics, Privacy and Social Justice	From the Expert(s)  Reading List for Week 1*	Introductions  Discussion Questions/Participation  ACM Code of Ethics
2: Ethics, Privacy, and the Data Science Project Lifecycle	From the Expert(s)  Reading List for Week 2*	Discussion Questions/Participation  Predictive Justice (Cook County Paper)
3: Ethical Lenses & Government Regulations	From the Expert(s)  Reading List for Week 3*	Discussion Questions/Participation  Government Regulations Presentation
4: Policies and Compliance	From the Expert(s)  Reading List for Week 4*	Discussion Questions/Participation  Work on Ethics Grand Rounds Presentation
5: Social Media and the Internet in Data Science	From the Expert(s)  Reading List for Week 5*	Discussion Questions/Participation  AI Case Study
6: Analytics in Government	From the Expert(s)  Reading List for Week 6*	Discussion Questions/Participation  Social Media Common Good Project
7: Data Science for Social Justice	From the Expert(s)  Reading List for Week 7*	Discussion Questions/Participation  Questions Case Study - Water Bolivia
8: Data Science for Social Justice (continued)	From the Expert(s)  Reading List for Week 8*	Discussion Questions/Participation  Ethics Grand Rounds Paper

# Ethics Grand Rounds Requirements

For this project, your team is asked to:

1. **write a paper** in response to an assigned case; your paper is to identify and integrate different concepts and applications we will be studying and discussing in class.
2. **lead a classroom discussion** (15-20 minutes maximum) including all questions, discussion, and debriefing)

Thinking and writing about the case:

Adopt one party's point of view in thinking through the situation in their case, the team will assume the role of one of the primary parties in the case; the team's decision should include that party's planned course of action and the rationale for their decision(s).

The case should be written from the perspective of the party you have "become" in the case, i.e., your paper should be written in first person.

At the conclusion of your paper, append a brief section (1-2 paragraphs each):

- a. in the voice of your group (i.e., we) in which you debrief the process you undertook (1-3 paragraphs); and
- b. by each individual member of the group in your individual voice (i.e., I), in which you debrief your individual learnings from the project (1-2 paragraphs for each person).

**Note that for (a) and (b) above, don't rehash your decision, reflect on what you personally learned about the process of making moral choices and ethical decisions and the experience of making that decision in a group.**

Each group may ask one (1) clarifying question of the case author. To do so, please email the question to me at [kpolson@regis.edu](mailto:kpolson@regis.edu), and be sure to indicate what case (letter) you are working on in the subject of the email.

# Ethics Grand Rounds Requirements (continued)

Other points of interest:

- there is no minimum or maximum length for your case paper.
- Your team is expected to lead the class in the discussion of your case for about 20 min. You do not need to repeat the facts of the case (class members should have the case in front of them already). You are encouraged to be creative in your leadership of our class discussion (e.g., reenactments, acting out different scenarios). One part of your leadership of our discussion should explain your decision and your rationale for your decision to the class. The last thing I'll do is ask the case author to identify him/herself (if he/she chooses to) and provide us "the rest of the story." Class members (and group members) may have questions for the case author.

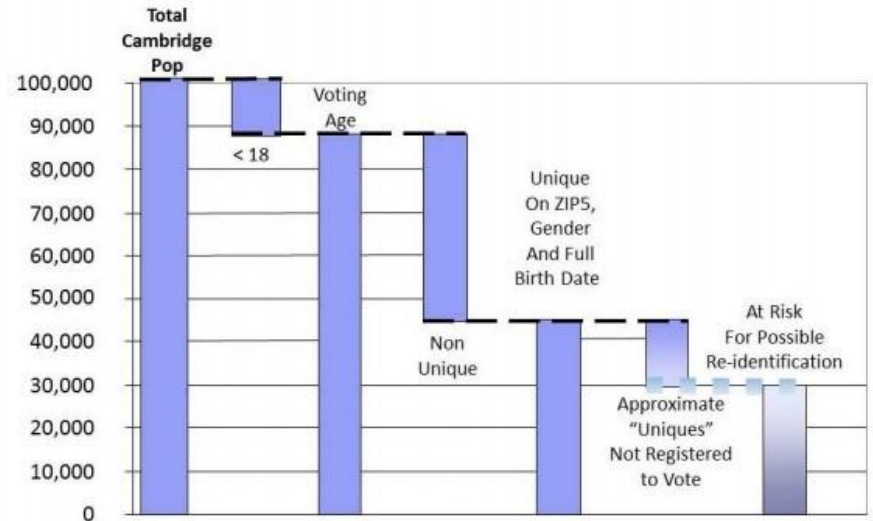
A note to Case authors:

1. Please be on the lookout for clarifying questions from groups referred through me.
2. Authors of the cases assigned to groups as projects may choose to identify themselves only after the case has been presented. This self-identification by the case author occurs only at the author's discretion.
3. Be sure to email me the "epilogue" for your case – "the rest of the story." Please email this to me at least one week ahead of class in which we'll be discussing your case.



# Example of ethical concerns

- De-identifying anonymous data
  - e.g. identifying MA governor from “anonymous” health insurance records
- k-anonymity and l-diversity



# Ethical concerns

- Algorithm bias
  - \_ e.g. facial recognition, police algorithms, gender bias
- Data collection and privacy



# Why so much ethics curriculum?

- Our idea is ethical people make for a better world
- Examples of ethical problems with police, finance, government policy, corporate policy, data science, etc
  - Wirecard fraud; stock buybacks for CEOs to get bonuses
    - Check out for more finance fraud like [Wirecard](#)
  - Corporate Bailouts, NSA (Snowden leaks)
  - Lack of sick leave (e.g. many fast food restaurants before the pandemic)
  - [Police algorithms](#), [AI Safety and bias](#), [NSA's SKYNET](#)
  - [ACLU pizza ordering video](#)
  - [Florida data scientist and COVID data](#)

# Social justice definition



- Justice in terms of the distribution of wealth, opportunities, and rights within a society (other definitions [here](#) and [here](#))
- For example, the wealth gap between white and black families in the US could be equalized by giving each black family \$800k, based on total wealth of white vs black families ([source](#))
- Also see the Minnesota paradox (e.g. discussed on the NPR Indicator podcast)
- Redlining still has impacts for blacks today ([source](#))

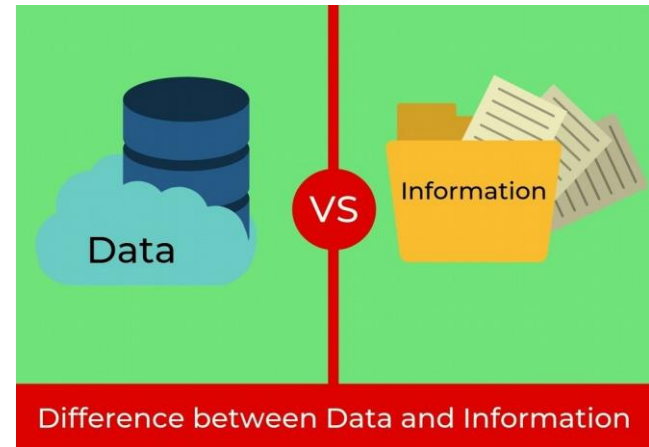
# Data vs Information

- In our context, data are the numbers and text we collect; information is distilling the data into “actionable insights”, or something we can use to understand the situation better and/or make decisions.

[Diffen.com explanation](#)

[Stechies.com explanation](#)

[Image source](#)



# Conversation Theme



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Amazon has become one of the largest companies in the world. It employs about 1.3 million people worldwide in both blue-collar and white-collar jobs. One of the hotly contested issues concerning Amazon is its tax avoidance by reinvesting any profits in other business ventures. Further criticisms include profiting over smaller sellers, collecting fees on each item it sells, and copying successful sellers' products, and driving prices further down. See article [here](#).

- Discuss an ethical issue related to data collection or analysis a data scientist may face.
- Provide an example, and discuss how the ethical issue can be mitigated.
- What could go wrong if we don't uphold ethical guidelines in data science and data engineering?
- Are there organizations that you know or think are violating the ACM guidelines?

# Case Writing Prompt

Your group (tbd) will complete a case study that illustrates and integrates concepts and applications we will be learning about in this course. Your task is to reflect on an incident that you have experienced in your workplace and to start thinking about it using concepts covered in the course. What concepts/theories relate to the incident you described?

Every class member must turn in (**via dropbox submission, by 11:59 pm on Sunday, October 22**) an anonymous, original, one-page or two-page max (single- or double-spaced) case problem that contains ethical content or one or more ethical dilemma(s). Name your file using this filename convention: “Thefirstfewwordsofthecase.doc” (i.e., this document would be called “Yourgroup(tbd)willcomplete.doc”); acceptable file formats are .doc and .docx). If for some reason worldclass is not working, you can send it to [kpolson@regis.edu](mailto:kpolson@regis.edu).

2. Keep in mind the parameters for your case:

- a. the case should not include the ending or decision made – it should be a “cliffhanger”;
- b. the case should involve a situation in an organizational setting;
- c. the case should describe a situation of which you have firsthand knowledge;
- d. the case should be one in which one or more ethical issues are present or one or more decisions involving ethics need to be made;
- e. the case may describe a current situation or one that has already occurred;
- f. the names of firms and people in the case should be disguised;

# Assignment ACM Code of Ethics

## ACM Code of Ethics and Professional Conduct

- Overview, description, explanation/example, classification of each ethical principle (1.1 through 1.7) from the [code of ethics](#)
- No page limit or requirement, but aim to write something substantial and meaningful in as short a length as possible
- “I would have written a shorter letter, but I did not have the time.” – Blaise Pascal

**Due next Tuesday 6pm.**

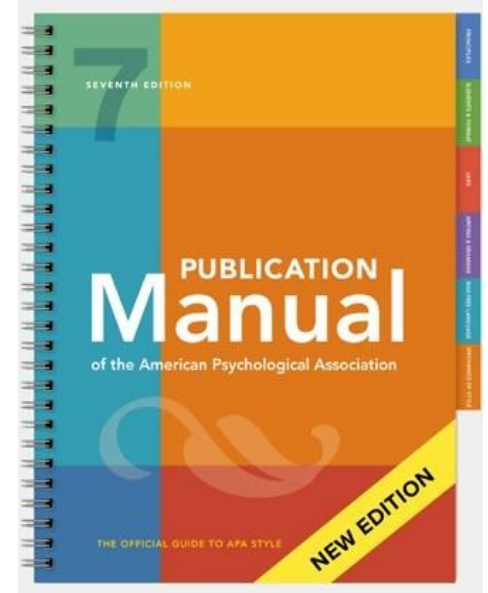


**Association for Computing in Machinery (ACM) Code of Ethics Grading Rubric**

Criteria	Points
Grammar, formatting, organization, writing quality and fluency	5
Classification and description of each ethical principle	5
<b>Total Points</b>	<b>10</b>

# APA format

- Papers should be in APA format
  - Templates can be found here:
    - [apastyle.apa.org](http://apastyle.apa.org)
    - [owl.purdue.org](http://owl.purdue.org)
    - [overleaf.com](http://overleaf.com)
- A [citation manager](#) is recommended



# **Next week (week 2)**

- We'll write on design and ethical considerations for an AI judicial assistant.
- We'll cover the data science lifecycle