

CMSC 304 Computer Ethics

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1

Bookkeeping

- This class: review, paper/presentation expectations, EA4 working groups
- Next class: Paper writing workshop (**bring computers**)
 - Bring your rough draft or outline in shareable format (Google doc)
 - Include *at minimum*: 3-5 references; **intro and outline of rest**; 2-3 case studies
 - Groups will go over and discuss topics and make suggestions
 - Feel free to bring presentation bones in case of extra time
- **At end of next class, submit PDF of rough draft/outline**

2

Paper content

- A deeper ethical analysis of a **broad** issue
- Select a topic (e.g., one from the list we went through on the second day of class)
- Identify the issues or ethical questions in this area
- Analyze the ethical, social, economic, and/or legal aspects of these issues
- Identify *at least* one ethical question identified to which you apply the ethical analysis framework
 - Analyzing possible policies, identifying stakeholders and consequences, and drawing and supporting a conclusion

3

Paper content

- This is an extended analysis – go beyond simple framework in two ways:
- **First**, you should look at the issues from multiple angles
 - For example, if you were to write an extended analysis of cryptocurrency, you might analyze the policies and issues from three perspectives: those of the crypto miners, ransomware attackers, and policymakers
- **Second**, you should also include *at least* two specific cases or incidents
 - For example, if you chose bias in AI, you might consider the cases of Timnit Gebru, the Optum health care algorithm, and Amazon's hiring algorithm, discussing the details of what happened and the ethical issue

4

Presentation: details

- Format: Google Slides
 - Keep your slides around at least until final grades are out!
- Length: 12-15 minutes, up to 8 minutes for questions and discussion
- Link to slides is due to me by midnight (by email) the day before presentations; actual slides can change until an hour before class
- 4 presentations per class period
 - Specific presentation slots posted on schedule
- Partners should plan to speak an equal amount

5

Presentation: content

- What is your topic area?
- What is the key question you are answering? What are the ethical issues?
- What background does the class need in order to understand the ethical issues raised by the topic area?
- What are the major analysis components (next slide)?
- What conclusion did you draw or policy do you recommend? What is your takeaway from studying the topic?

6

Presentation: ethical components

- Who are the stakeholders affected by the ethical question?
- What makes it an ethics question?
 - What sides are there? What's the ethical dilemma?
 - Your stance / policy / answer
- Pros and cons of your answer
 - Why it's the best / a good answer, AND its downsides
- **Will someone with no previous grounding in the topic come away understanding the core issues and what you think should happen?**

7

Giving a good presentation

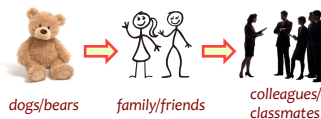
- Make slides visually interesting when possible
 - Images, animation (sparingly), even color can help.
- Never just read out the slide
 - People can read faster than you talk
 - Then they're done, and you're still talking
 - Have bullet points that remind you what to say
- Never have text on a slide smaller than 18 point

Practice! (I cannot stress this enough.)

8

Logistics and timing

- Getting timing right: practice, practice, practice!
 - Especially crucial for partners
 - I recommend giving practice talks in this order:



- Most presenters can cover 1 slide in 30-60 seconds
- So you probably want at most 12-24 slides

9

One possible outline (of many)

Topic statement	1-2 minutes
Core ethical question	1-3 minutes
Background information	2-5 minutes
Ethical question, reiterated	1 minute
Policy position, possibilities	1-3 minutes
Ethical analysis of policy Stakeholders, sides, pros and cons Consequences of policy (good and bad)	4-6 minutes
Central takeaway/key points	2 minutes

10

Audience responsibilities

- Listening attentively
 - Please give the presenter your full attention!
 - No computers, tablets, or phones
 - Hold questions to the end
- Asking good questions
 - Concise – don't use up the Q&A period asking
 - Relevant – questions, not anecdotes
 - Discussion is encouraged
- **Filling out feedback forms on each presentation**
 - Part of participation grade

11

Review: What have we covered?

- What does it mean to be responsible? Blameworthy?
- What are some key ethical theories we can use to analyze questions?
- What are codes of conduct, and what are they good for?
- What kinds of ethical argumentation are there?
- What are some key issues in the areas of...
 - **Ethics and AI?**
 - **Representation in STEM?**
 - **Cyber warfare?**
 - **Video games?**
 - And more...
 - The IoT?
 - Cryptocurrency?
 - Cyberstalking?
 - Social media?
 - Deepfakes?
 - Self-driving cars?
 - Privacy?
 - App development?

12

Responsibility

- What is responsibility?
 - Being held accountable for **your actions** and for the effects of your actions
 - Accountability for your **failure to act** and for the effects
- Some responsibility is based on your “role” and some is not
 - Brother, sister, engineer, manager, friend, student, professor
- Accountability: When you must justify your actions to those affected
- Blameworthiness: requires that some wrong have occurred; you had some causal role in it; the results could have been foreseen; and you were acting voluntarily (not under duress)

Adapted from slides by Edmund J. Byrne III, with thanks

13

Why do we care about responsibility?

- One of the core ethical concepts is **harm**
 - When we talk about ethical consequences, the negative consequences are usually some kind of (direct or indirect) harm to persons
- We establish what happened in order to make it not happen again
- To do that, we need to know why the harm occurred
- Ethical topics are usually **interpersonal** – the harm occurred because someone caused harm
 - And we need to know who and why!
- **Ethical decision-making involves understanding what harms are done.**

14

Ethical theories (1)

- **Consequentialism:** Maximize the overall good
 - ‘The greatest good for the greatest number’
 - Utilitarianism has a specific concept of ‘good’: Something is right if it has utility
- **Deontology:** The **right** is more important than the **good**
 - It’s about what you do, not what happens
 - It is moral to follow rules (behave ethically), and intent is what matters
- **Contractualism:** Rightness is defined by following a social contract
 - We all agree to do things in order to live in a society we can all stand

Adapted from slides by Edmund J. Byrne III, with thanks

15

Ethical theories (2)

- **Rights-based:** ‘goodness’ is based on whether people’s rights are infringed (rights-sustaining vs. rights-violating)
 - Negative vs. positive rights
 - Legal vs. natural rights
- **Virtue-based:** ‘goodness’ is based on personal character
 - Focus on the nature of the acting person, not solely based on reason
 - Develop into morally good and responsible people by focusing on intellectual and personal virtues

Adapted from slides by Edmund J. Byrne III, with thanks

16

Why do we care about ethical theories?

- Core of ethical discussion is deciding whether certain things are ‘right’ or ‘wrong,’ and what actions and policies maximize ‘goodness’
- Very hard to discuss without some definition of goodness!
 - Ethical theories are attempts to formalize our ethical intuition!
- Ethical theories provide a framework for saying ‘We should do X because it maximizes goodness in the following sense’
 - A lot more discussion-oriented than ‘it just seems bad to me’
- We have multiple theories because none is perfect
- **Without theories we have no shared ground for discussion**

Adapted from slides by Edmund J. Byrne III, with thanks

17

Codes of conduct

- Guidelines for responsible behavior of members of an organization
 - Students; [software] engineers; professors; ...
- Something that **adds** to your responsibilities under the law
 - Enforced by organizations, not by governments
- Professional and corporate codes
- Three types:
 - Aspirational Code — express moral values
 - Advisory Code — helps determine actions in real situations
 - Disciplinary Code — cause behaviors to meet certain norms

Adapted from slides by Edmund J. Byrne III, with thanks

18

Why do we care about codes of conduct?

- The law is generally lagging behind the technology
- We would like, as professionals, to be ethical agents
 - And we would like the people around us to do the same!
- There are a number of ethical questions that don't rise to the level of being illegal
- When discussing ethical questions, it helps to have something to refer to that provides some guidance
- **In practice, professional CoCs are more focused, relevant, and thorough for our issues as professionals**

19

Argumentation

- Ways to input premises and get to conclusions
 - Deductive and Non-Deductive Argumentation
 - Argumentation Applied to Ethical Theories
 - Common Fallacies
- Arguing is **affirming or refuting statements**
- A sequence of logically connected statements
- Arguments can be **valid** (follow from the premises), **sound** (accurate statements about the world), or neither
- Most ethical arguments are deductive



20

Why do we care about argumentation?

- Fundamental core of ethical analysis is an argument
- A series of statements and background knowledge (premises), then a claim(s) about outcomes or results
 - "If we outlaw hate posts, then free speech will be impacted"
 - "If we don't, then people will be harmed by hate speech"
- **Without argumentation, we have no way of going from premises to conclusions – we can't get anywhere**
 - Formal argumentation theory attempts to capture our intuition about how discussions work

21

Ethical discussion: software IP

<http://tiny.cc/sw-ip>

- <https://bit.ly/3KtcbQ2>
 - <https://onlineethics.org/cases/cases-teaching-engineering-ethics/who-can-change-proprietary-source-code>
- What should the software engineer do initially?
- What should he do after the company has asked him to deploy the software more widely?
- Has he committed any ethical wrongs? Legal wrongs? CoC wrongs?
- Should the software engineering CoC have prevented his actions?

22