



CSCI 215

# Social and Ethical Issues in Computer Science

Ethics discussion



Can you hear me?  
Can you understand me?  
Can I understand you?  
Discord server:  
<https://discord.gg/vAtArP>



# Any Questions On Syllabus/Schedule?



# How To Attend Class

- In person on “your” day
  - Can’t have more than 53 people in the room at a time
- By zoom
  - Can attend class virtually during our class time
- By watching the recording of the class at any time
  - I record through zoom
- I am using discord for questions and comments. I will not answer on discord unless you can’t hear me in class. I will answer on discord when not in class
  - Please don’t use zoom chat – I minimize that so my screen has the slides on it
    - I have discord on my ipad so I am looking at that all the time



# If you are sick

- Don't come to class
- Contact your doctor or MSU health
- If I am sick, I cannot come to class
  - I will put an announcement in both brightspace and discord
  - Unless I am really sick, I will hold class via zoom that day



# Intro Stuff

- Recitation – starts next week – not this week
  - It is done through MS Teams so you do not have to meet anywhere
  - Also, you won't meet at a specified time on MS Teams
- I put the slides on brightspace for the week the week before class
  - BUT I may change it as I do my final review before class



# Recitations

- Starting next week
- By Tuesday at 3pm, each of you in your team will create a presentation video for the subject
  - You will put 3 thought provoking questions about your presentation in the MS Teams chat for your team
- You will upload them to your MS Teams location
- Each of you will answer 2 of the questions in each person's presentation in your team's chat
  - You can either give a fresh answer or respond to someone else's answer
  - Both have to have a good, thoughtful answer
    - Not just "I agree with you"



# Each Class Period

- I will have 4-5 of you give your presentation in class
  - I will record it and put it in your MS Team location for you
  - You only do this once for the semester
  - I will have who presents when by Thursday
  - You won't have to put questions for your presentations into MS Teams for the week you present



# Important Points

- If you get a 75 or less on the first writing assignment, you can make changes and resubmit once



# Differences from Previous Semesters

- Recitations through Microsoft Teams
  - No meetings for recitations
- Recording all class meetings
- No group discussions in class
- Computer Science career discussion optional on last day (finals day)
  - Starting right in on ethics at the beginning



# What is Ethics?

- Ethics definitions
  - Traditional – ethics has referred to the philosophy of morality
  - Now – refers to the ideals and rules of professional groups
  - From book: Ethics is a set of morally permissible standards of a group that each member of the group (at their rational best) wants every other member to follow even if their doing so would mean that they must do the same
  - Another: The term ethics often describes the investigation and analysis of moral principles and dilemmas.
- Morality is the set of standards everyone (every rational person at his or her rational best) wants everyone else to follow them even if their following them means having to do the same



# What are ethics?

- Ethics allow us to identify principles of right and wrong that motivate individual behavior and underlie evaluations of the appropriateness of one's own and others' behavior.
- Ethics are typically part of a system telling us how to evaluate actions, offering ways to specify what is right (do good) or what is wrong (do harm) and how to distinguish and choose among alternative courses of action. Indeed, it is common to talk of an ethical system.

Taken from <http://www.pitt.edu/~mitnick/EBEweb/Ethics%20Slides-plain%20text.html>



# What are ethics?

- An ethical problem is a situation with ethical content, requiring individual choices.
- Ethical issues arise when there are two or more right answers, or when there are two or more wrong answers and no obvious right answer. When the choice is between right and wrong, there really is no ethical judgment involved



# Ethical Reasoning

- Many solutions are seen differently by different people
  - different opinions
  - but some answers may be clearly wrong
- Can you give me an example of something that is clearly wrong?



# Ethics and Morality

- Ethics and morally good not synonymous
- Ethical – consistency with a standard
- An action can be unethical without being immoral



# Moral Theory

- Differences in moral theory and ethical theory can lead to some heated arguments
- When discussing ethics, we need to understand the person's underlying definition of morality and the group for which these morals apply
  - Example: abortion – physicians vs software engineers



# Some Business Ethics Issues

- Stealing
- Lying
- False impression, fraud and deceit
- Conflict of interest
- Hiding vs divulging information
- Cheating, unfair advantage
- Interpersonal abuse
- Rule violations
- Accessory to unethical acts

Taken from <http://www.pitt.edu/~mitnick/EBEweb/Ethics%20Slides-plain%20text.html>

# Is Ethics Only a Personal Matter?



- Individual level
  - personal history and inheritance
  - personality and character traits
  - lifestyle choices
- Organizational level
  - Corporate culture, norms and values
  - mission and objectives
  - incentive systems
- Society level
  - Cultural norms and values
  - religious norms and values
  - laws and regulations
- Global level
  - Cultural and religious norms and values
  - International agreements

Taken from <http://www.pitt.edu/~mitnick/EBEweb/Ethics%20Slides-plain%20text.html>



# Ethical Perspectives

- Consequentialism or Utilitarian
  - Behavior is guided by outcomes or effects. Its central assumption is that the satisfaction of the affected actors is the indicator of desirability. Thus the action is desirable if the affected actors are made better off.
  - For instance, most people would agree that lying is wrong. But if telling a lie would help save a person's life, consequentialism says it's the right thing to do.



# Ethical Perspectives

- Deontological
  - Behavior is guided by absolute ends, norms, values or other views of desirable states. It is typically driven by instructions embedded in rules or directives
  - Deontological ethics holds that at least some acts are morally obligatory regardless of their consequences for human welfare. Descriptive of such ethics are such expressions as “Duty for duty’s sake,” “Virtue is its own reward,” and “Let justice be done though the heavens fall.” from  
<https://www.britannica.com/topic/deontological-ethics>



# Ethical Perspectives

- Justice
  - Behavior is guided by a judgment of the appropriate balance among desirable states or outcomes for two or more actors. An action is desirable if the result is judged fair for the multiple actors involved.
  - Criteria for judging: fairness, equity, distribution



# Fundamental Human Rights

1. The right to freedom of physical movement.
2. The right to own property.
3. The right to be free from torture.
4. The right to a fair trial.
5. The right to be free from discrimination on the basis of such characteristics as race or sex.
6. The right to physical security.
7. The right to freedom of speech and association.
8. The right to minimal education.
9. The right to subsistence.

Taken from <http://www.pitt.edu/~mitnick/EBEweb/Ethics%20Slides-plain%20text.html>



# Resolving Ethical Conflict

Gather the data

- Analyze the actions in the light of the particular ethical criteria under each category: utility, rights, and justice
- Weigh the results for overwhelming factors:
  - Is one criterion more important than any other?
  - Are there any incapacitating factors?
- Does it pass the “double effect” test, i.e., do effects cancel or work against one another?
- Make a judgment



# Conflict of Interest

- A conflict of interest arises when what is in a person's best interest is not in the best interest of another person or organization to which that individual owes loyalty.
  - For example, an employee may simultaneously help himself but hurt his employer by taking a bribe to purchase inferior goods for his company's use.

# Computing Professions and Professional Ethics

## Case study: Fighting Injustice



- Rachel, CS Major, Senior – works part time IT at MSU
- Needs to install print driver on Dr Paige's printer
- Dr Paige: "Just log me out of my email and do what you need to do"
- Bad semester for Dr Paige
  - Target for ZTBT – zero tolerance for bad teaching
- Rachel's experience with Dr Paige – good teacher
- Saw email – Dr Paige diagnosed with MS
- That evening Rachel posted comment on ZTBT website about Dr. Paige's illness
  - Her comment was challenged on how she knew and she admitted to reading her email
- Rachel's boss called her in – violated IT privacy policy
  - Rachel had signed documents so she knew the policy
  - violated the ethical standards of her job
- Rachel was fired with no recommendation for future employment



# Questions

- Were Rachel's actions moral?
- Were Rachel's actions ethical?
- Was her boss justified in firing her?
- Suppose Rachel hadn't seen the email through her job. Instead she was in the office as a student getting help from Dr Paige when she saw the email. Any difference in your answer?
- Did Dr Paige behave ethically when she asked Rachel to log her out of her email?



# Refusing to do a favor for a friend

- Greg recently graduated from MSU with CS major
- Now he is a SW engineer at a large SW company
- Receives a call from Michael, a close friend who is still at MSU/CS major
- Michael is stuck in Michigan due to snow storm – no laptop
- He asked Greg to log into his MSU acct and submit his AI project due at 5pm.
- Greg refused – clear violation of Student conduct and SW engineering code of ethics
  - He also felt he would be misrepresenting his true identity on his company's computer
  - Professional duty forced him to refuse



# Questions

- Did Greg do the right thing?
- Because Greg is no longer a student, does the MSU code of conduct still apply?
- If you were going to write a code of ethics for SW engineers, would you write about situations like this?



# Why do we care about professional ethics (standards) of computing?



# Why?

- For every computer system, there is at least one person with access to all files
- For every database there is at least one person with access to all the data
- For every request for info on the internet, there is at least one person who has access to all info sent and received
- For every instrument of travel, there is at least one person who had decisions that affect the passengers' safety
- For every hospital admission, there is software involved for the patient's care, safety, treatment.



# A Better Way

- Chandler – young developer at a major corp
- Develops in-house SW apps for the company's scientific research group
  - Computing calculations
  - While testing, he notices the outputs are not completely precise which means the calculations aren't precise
  - They meet acceptable degree of precision but not preferred degree of precision
  - He traces the problem to a standard library being used
  - He determines a new library needs to be written
- Boss: neither time or money to do this
  - He has been with the company 20 years and not programmed in a long while
  - His solution: include in documentation – current technology makes higher degrees of precision impractical



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