Week 5: Professional Ethics
February 9, 2022
Do computer professionals need to worry about ethics like lawyers or physicians?
Wally, I discovered a deadly safety flaw in our product. Who should I inform?

No one. The stock would plunge and we'd have massive layoffs. Your career would be ruined.

But my negligence could cause the deaths of a dozen customers.

The first dozen is always the hardest.
A Computer Professional’s Story

- Jacobus Lentz, Dutch inspector of population registries before World War II
- Partnership with the Nazi Government
- Role in Hitler’s Final Solution
Do computer professionals need to worry about ethics like lawyers or physicians?

Privacy and security
Recall Therac-25
Financial decisions (e.g., tax software)
What is a profession?
Characteristics of a Profession

- Initial professional education
- Accreditation
- Skills development
- Certification
- Licensing
- Professional development
- Code of ethics
- Professional society
Is Computing a Mature Profession?
Preamble of Code

- Software engineers have opportunities to do good or do harm
- Software engineers ought to be committed to doing good
- Eight principles identify key ethical relationship and obligations within these relationships
- Code should be seen as a whole, not a collection of parts
- Concern for the public interest is paramount
Software Engineering Code of Ethics:
8 Key Principles:

• Public
• Client and Employer
• Product
• Judgment
• Management
• Profession
• Colleagues
• Self
PUBLIC - Software engineers shall act consistently with the public interest
CLIENT AND EMPLOYER - Software engineers shall act in a manner that is in the best interests of their client and employer, consistent with the public interest
PRODUCT - Software engineers shall ensure that their products and related modifications meet the highest professional standards possible
JUDGMENT - Software engineers shall maintain integrity and independence in their professional judgment
MANAGEMENT - Software engineering managers and leaders shall subscribe to and promote an ethical approach to the management of software development and maintenance
PROFESSION - Software engineers shall advance the integrity and reputation of the profession consistent with the public interest
COLLEAGUES - Software engineers shall be fair to and supportive of their colleagues
SELF - Software engineers shall participate in lifelong learning regarding the practice of their profession and shall promote an ethical approach to the practice of the profession
Analysis of the Code

• Questions demonstrating the multi-faceted grounding of the code:
  ▪ Who is affected?
  ▪ Am I treating other humans with respect?
  ▪ Would my decision hold up to public scrutiny?
  ▪ How will those who are least empowered be affected? Are my acts worthy of the ideal professional?
Alternative List of Fundamental Principles

- Be impartial
- Disclose information that others ought to know
- Respect the rights of others
- Treat others justly
- Take responsibility for your actions and inactions
- Take responsibility for the actions of those you supervise
- Maintain your integrity
- Continually improve your abilities
- Share your knowledge, expertise and values
Class Discussion– Analyze the Software Engineering Code of Ethics
• Relevant fundamental principles:
  ▪ Be impartial
  ▪ Disclose information that others ought to know
  ▪ Share your knowledge, expertise, and values
List of clauses associated with these fundamental principles:

- (Public) 2.06  Be fair and truthful in all matters
- (Public) 2.08  Donate professional skills to good causes
- (Judgment) 3.06  Disclose conflicts of interest
- (Judgment) 3.07  Avoid conflicting financial interests
- (Profession) 6.09  Place professional interests before personal
- (Profession) 6.13  Share software knowledge
Conclusion

- Professor Smith should have revealed her conflict of interest to Mr. Shaw.
• Examples situations:
  ▪ Actions/products of employer can potentially harm the public
  ▪ Fraudulent use of tax dollars
Morality of Whistle-Blowing
Whistle-Blowing as a Moral Duty