Today

- Quiz 1
- Wrap up from last time
- Professional Ethics (cont)
- CEDE Fall Workshop & Social
- Quiz next Wed

Homework

- Exercise Set 1 due
- Exercise Set 2 out (due next Wed) ... NOTE: Use Soft. Eng. Code
More Terminology and Distinctions (from Textbook)

Wrong vs Harm

- Harm alone doesn’t imply unethical (e.g., accepting a job may cause harm to those who also wanted it)
- Unethical behavior may not cause harm

Ends vs Means (Goals vs Constraints)

- How a goal is achieved may be ethical / unethical
- E.g., a business may want to maximize profits
- It can do this in an ethical or an unethical way

Personal Preference vs Ethics

- Personal feelings of right or wrong may not correspond to ethically right or wrong

Laws vs Ethics

- Some laws may enforce ethical principles
- Ethical principles often proceed / inform laws
- But many laws have little to do with ethics
- E.g., conventions like driving on the right-hand side
- Or laws that help certain special interests

Copyright and patent laws have aspects of each

- Enforce “fairness”, some conventions, some special interest aspects
What does it mean to be a “Professional”?

1. Your **vocation** (calling, trade, life’s work)
   - drawn, committed, identified, well suited/qualified/trained for it

2. An **investment and commitment** to the field
   - e.g., through education and training
   - entering field often seen as commitment to profession (e.g., don’t just become a MD to “get a job”)
   - people often change jobs, but not professions

3. **Professionals protect a vital public good**
   - Medical professionals: public health and well being
   - Legal professionals: the justice system
   - Scientists: scientific knowledge, scientific process and methods
   
   Q: What about software engineers? What is the public good?

4. **Receive public’s support, respect, and trust**
   - ... and so the power of influence over how people live
   - medical professionals influence public health decisions
   - judges influence the interpretation of laws and precedence
   - scientist influence public policy decisions
   - ... professionals have special ethical obligations to the public they serve
   - Q: What about software engineers? What is their “power of influence”?
IEEE/ACM Software Engineering Code of Ethics

Emphasizes rules and principles ... so deontological

• E.g., “Ensure products meet highest standards possible”

• As opposed to virtues (responsibility, honesty, sense of fairness, etc.)

Each principle is composed of a set of clauses

• E.g., “Ensure adequate testing, debugging, and review of software and related documents on which they work”

• “The list of principles and clauses are not exhaustive”
The 8 principles in the code

1. **Public**: act consistently with the public interest

2. **Client/Employer**: act in the best interests of their client and employer, consistent with the public interest

3. **Product**: ensure products meet the highest professional standards possible

4. **Judgement**: maintain integrity and independence in their professional judgement

5. **Management**: subscribe to and promote an ethical approach to management of projects

6. **Profession**: advance the integrity and reputation of the profession consistent with the public interest

7. **Colleagues**: be fair to and supportive of their colleagues

8. **Self**: participate in lifelong learning and promote an ethical approach to the practice of the profession

In the code, the public interest always comes first
The code is not an algorithm

“... not a simple ethical algorithm that generates ethical decisions”

“... standards may be in tension with each other”

“... require the software engineer to use ethical judgement to act in a manner which is most consistent with the spirit of the [code] given the circumstances”

“Ethical tensions can be addressed by thoughtful consideration of fundamental principles, rather than blind reliance on detailed regulations ...”