CPSC 224 Greyson Knippel

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# hw-6

## Part (A)

1. ***Read the Preamble and Section 1 (General Ethical Principles). (a) Write down your general thoughts as you read through the seven principles (items 1.1–1.7). (b) List at least 3 things that you found surprising or might not have expected as you read through the principles.***

After reading the preamble and section 1, I really wasn't surprised. All of these topics mentioned are common sense and most of them should be closely followed. But I ironically feel like a computing machine myself when I read through this. The text fittingly felt robotic and lifeless, something I feel computing shouldn't revolve around. All off these "rules" to follow can basically all surmise to "Is water wet?" "Is grass green?" I think computing should be the opposite of this. Instead of having these rules (of course all of them are in good conscience, but the rules are just common sense that everyone knows), I feel as if some of these rules should be sacrificed in order to make more creative/fun software. Of course, no software should imply any sort of discrimination, or intentional physical harm, or just anything revolving around that, but in order for software to truly be interesting and groundbreaking, I think you kind of *have* to bend these rules in some ways. Collecting personal data is seen as a negative aspect in this text, but sometimes collecting personal things about people can lead to breakthroughs in the economy, technology, and just generally interesting results. For example, look at this home robot (neo). This autonomous robot that is essentially an LLM that inside your home and constantly learns is **100%** going to know things about you that you wish it didn't know about, but in the bigger picture is that really a huge threatening problem? I'm of course not saying it's good, but it's still interesting to think about and the perks that this robot gives you are still groundbreaking while still considering the tradeoffs for privacy and the environment. I guess what I'm trying to say here is that you shouldn't always follow concrete rules in the tech industry. I feel as if it won't lead you to something truly groundbreaking or interesting.


With this paragraph above me, I genuinely can't find anything that surprised me within these first few paragraphs. Everything listed here is very cliché and strung out. I guess the only thing that surprised me is that computing professionals "…are encouraged to actively contribute to society by engaging in pro bono or volunteer work that benefits the public good." And "In addition to a safe social environment, human well-being requires a safe natural environment. Therefore, computing professionals should promote environmental sustainability both locally and globally." I never thought that computing professionals should promote environmental sustainability.

2.  *Read through the professional responsibilities in Section 2. In your own words, briefly summarize how the ACM Code is defining professionalism based on the listed responsibilities. For example, Martin gave a narrow definition of professionalism. Similarly, how does the ACM Code compare to Martin's definition and how would professionalism be defined from the ACM Code in a few sentences (based on Section 2)?*

Basically, what the ACM means by professionalism is knowing your stuff. You should know terms, and strategies that are used every day in your expertise, and you should be able to advise and create solutions surrounding those problems. You are basically the leader of your profession by being a "professional".

ACM's version of professionalism is actually fairly similar to Martin's version, which again, basically knowing your stuff and curating polished, experienced work in relation to your profession. ACM's doesn't nearly talk as much about responsibility, and not feeling sorry for yourself/fixing your mistakes instead of apologizing compared to Martin, which is a key difference I noticed.

Again, the ACM Code would define professionalism as having extensive knowledge of your profession, including safety, review, the rules of it, communication, awareness, and consequences.

3.  *Under 2.5 ("Give comprehensive and thorough evaluations") the first sentence states: "Computing professionals are in a position of trust, and therefore have a special responsibility to provide objective, credible evaluations and testimony to employers, employees, clients, users, and the public."*
    *(a) Explain what you think it means when it says professionals are in a position of trust.*

When it says "professionals are in a position of trust", it essentially means that people look up to them. When a problem arises, they look to a professional to help them solve it. They look to the professional when there is an ethical concern, a bug in the code nobody can solve, a design choice. Professionals are supposed to have experience and they use that experience to gain knowledge and wisdom for these problems that arise.

*(b) List three different example scenarios where this trust could be broken with the public.*

Trust can easily be broken from a professional if they simply are just wrong when it's their turn to solve the problem.

Trust can also be broken if they break some ethical rule, for example revolving around personal data/ethics.

Finally, this trust can be broken when the professional isn't confident and doesn't show great communication skills when trying to solve the problem. ACM makes it pretty clear that having good communication skills and conveying your solutions with confidence is important in being professional. Being unsure would probably scare me if I was an intern asking the professional for help with something a professional should know.

*(c) Why do you think it specifically calls out machine learning systems? That is, what in particular about these systems could result in erosion of trust, and what would the impact be for the profession?*

It mentions machine learning because machine learning isn't nearly as confident and right as a true professional (at least for now). These systems certainly aren't always right in predicting things. Machine learning builds off of other people, and people can be wrong sometimes. Impact for the profession could include loss in skill and confidence if machine learning is used to predict risks.

4. *Under 2.2 ("Maintain high standards of professional competence, conduct, and ethical practice") and again in 3.5 ("3.5 Create opportunities for members of the organization or group to grow as professionals") there is an emphasis on continued learning and growing as a professional. While often this is considered from the viewpoint of an individual increasing their own knowledge and/or staying current, these two points are not solely about individual responsibility.*
   *(a) Describe in your own words why these are essential for the profession itself (as opposed to being important for an individual).*

   These opportunities of growing and increasing your skills for this profession is very important because active learning especially in a profession that grows extremely quick is crucial in keeping the profession alive and thriving. This is obviously more important as it revolves around an entire profession, rather than just the skills of an individual.

   *(b) What are things you can do now to improve your own knowledge, skills, etc., outside of the classroom (formal education)? What habits do you personally need to*

*develop to ensure you maintain your growth in the profession (outside of your specific job, etc.)?*

There are basically an infinite number of things you can do now to improve your skills, knowledge, and communication skills surrounding the computing industry. You can make your own projects, be a more social person, and surf the internet for tons of things to learn about computing. Some habits in order to maintain this growth is to push to github (whether it be a personal project, or a class project) at least once a day to improve skills like github skills, general coding skills, and design skills.

5. *Relate the ACM Code, focusing on Sections 1 and 2, back to each of the prior readings.*

*(a) What are ethical principles you would add, modify, or extend in Section 1 based on our prior readings? Identify at least three items.*

I would add a section related to technical awareness. This could be spotting malicious software, spotting aspects that could harm the project and the customer, etc… (from the Charette reading)

I would also add a section based off of Martin's definition of professionalism. Being responsible and fixing your mistakes is a huge aspect of being a good professional. Not feeling sorry for yourself is a good step in becoming a leader in computing.

Finally, I'd modify the 1.6 "Respect Privacy" like I said in the first question sometimes getting personal data can lead to impressive results. Of course I'm not suggesting to steal all data and harm you for it, but having a policy that users can agree to in order to get personal information would be sufficient.

*(b) Consider the state of computing today. How well would you rate modern companies and the technologies being developed in terms of Sections 1 and 2 of the ACM Code. In what ways are companies doing well and/or poorly?*

I would rate modern companies around a 7/10 in terms of the ACM Code. Most companies don't really make original ideas, nor do they credit the work. And most companies aren't 100% honest with the users in terms of data collection (which is inevitable), but other than that, computing today has been generally increasing in terms of

quality in the last 10 years. It's contribution to society can be noticed through section 1 and 2's rules.


# Part (B)


✅ **completed option extended version from HW-4**