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8 October 2023

CprE 394

Ethics Essay

The purpose of this document is to answer questions about ethics and questions relating to the Computer Engineering 394 course offered at Iowa State University during Fall of 2023.

From my own words, the purpose of having and following an engineering code of ethics – such as the IEEE Code of Ethics -- is to hold engineers to a standard of behavior that preserves each engineer, team, firm, and society. People are often faced with situations that encourage behavior motivated by short-term gain. However, short-term gain can sometimes come with a long-term cost.

When I am faced with an ethical decision, my thought process is the following: I consider if a decision is illegal, if it breaks rules, or if it breaks compliance agreement(s). If a decision breaks any of these, it is normally clear enough to go another route. I consider high-level whys and high-level motivations of a project/decision. For example, if it doesn't break rules, does it get my team, project, or company closer to our high-level goals? Or does it satisfy a lesser, short-term desire? Am I looking out for my own good? I often seek counsel (or guidance) from a peers, superiors, stakeholders, and/or mentors. I also do my best to consider all affected parties and their perspectives.

During this class, CprE 394 at Iowa State University during fall of 2023, we reviewed the IEEE Code of Ethics, the Virtue of Ethics, the 5 P's of Ethics, and discussed three separate case studies. We, as students, were not given citations or sources for the four case studies. Nevertheless, we discussed the Ford Pinto gas tank placement, Amazon Echo data case, and a "big data" issue where a subcontracting algorithm/code developer was emailed data that violated the Minimum Standard for Access Protected Health Information.

Ethical considerations of the class differed slightly from my own. Buy-and-large, our discussion group agreed on certain things; however, I considered a different stakeholder for the Ford Pinto Issue than the rest of the group. I did bring a discussion point regarding the shareholders of Ford Motor Corporation, who care largely about the bottom-line in addition to both the long-term and short-term success of the corporation. The CEO, who reports to the bord of directors, who reports to shareholders, is in charge of the operation of the company and must balance the needs and wants of many stakeholders – who have a wide range of desires and importance of the respective desires. Our class did not have to come to an agreement on the best decision for each case study. Rather, we each had to comment on other student's perspective of the case studies.

Given that I must choose three of the six virtues that most relate to my case study, I choose Integrity, Fidelity, and Self-Discipline. Note that the case study that I did was the Big Data Issue. I choose these three virtues because I believe that the other three fit into these three. I think that almost any other ethical virtue could be argued to fit within the three that I choose, so I do not think that any other ethical virtues should be added to the three that I chose.