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Ethics Essay

Engineering is an incredibly impactful field where our solutions, technological advancements, and recent developments can shape and influence society. Engineers pioneer the future, and we want that to be as beneficial and safe as possible for all. To do that, we all need to follow a Code of Ethics in order to keep the public safe and maintain the well-being of our community, Earth, and future. Ethics is however, a widely complex issue that philosophers, psychologists, and the public have been arguing over for years. With many different perspectives and views, all engineers need to agree on a common Code of Ethics to improve safety and minimize dangers. As engineers, we are responsible to go beyond these codes and work to protect the public, improve solutions, and plan for possible situations.

In a situation that requires an ethical evaluation, I approach the problem first with an open mind and try to gather as many possible solutions that a team of my peers or myself can procure. Then, I think it is important to eliminate any options that are possibly illegal or would have any hazardous effects. Once only sustainable, ethical options are left - I evaluate the pros and cons of each potential solution. From here, I am able to pick the option that yields the best result and maximizes long term benefits. Sometimes this option isn't always the cheapest or easiest choice, but safety and longevity of the solution are more important than cutting corners.

In class with Ms. Tina Prouty, we held an online discussion and were given multiple cases to read and evaluate ranging from a Ford Pinto design flaw, Amazon Alexa being used as evidence in a court case, and medical information. I chose to read and reflect on the case pertaining to medical injuries and Personally-Identifiable-Information (PII). The case involved an engineer named Marcus that was independently hired by a large corporation to compile statistics on

easily-preventable injuries of emergency care staff. His current system has an algorithm that disregards names and other PII from medical records, and only provides him with a list of the common injuries. This way Marcus does not violate the Code of Ethics and protects others' PII. Marcus's contractor, John, hears anecdotal evidence from a paramedic that needle-poke injuries are quite common and John decides this information should be included in Marcus's report. John sends Marcus a list of needle-poke injuries through the city's infection center that have recently occured, but includes in the list the names, age, and HIV status of each individual. Marcus knows he is federally obligated to protect PII and feels uncomfortable receiving this information, but is unsure what to do about everything.

This issue is that Marcus now has access to injuries that he originally was not given access to alongside the PII attached to those injuries. Personally Identifiable Information is federally protected and can't be disclosed, Marcus knows he should not have access to any of it as a private contractor. He's worried that creating a conflict could cost him the contract and work. In our online discussion a team of my peers and I agreed that the situation violates the IEEE Code of Ethics and the 5 P's. We found it violates the first and the second entry of the IEEE Code of Ethics which deals with health and safety, and conflicts of interest. We felt it violated the 5 P's, particularly Pressure. Marcus feels pressured to include the data by John and is worried about consequences should he not follow-through. Marcus has every right to be concerned and should raise his concerns to John privately about having access to PII. If John brushes off Marcus's concerns, Marcus needs to elevate the issue and report the misuse of allowing him access to PII.

For the Virtue of Ethics, I am choosing to focus on integrity, honesty and responsibility. I'm choosing to write about these three because they closely relate to and rely on one another. I like to think of them in terms of integrity is the moral standard that you hold yourself and your work, honesty is openness and truthfulness to oneself, and responsibility is respect and diligence in your professional life.They relate very well to the story of Marcus and Personal-Identifiable-Information. Marcus is put in a situation

where all three of these factors are called into question. His integrity, honesty to self, and professional responsibility is being evaluated on whether or not he decides to speak up about the matter. The other virtues, while important, were not as relevant to the case. I didn't feel that Marcus's loyalty or fidelity, self-discipline, or compassion and charity were the issue here. He was loyal to his client within ethical reasons, he was not undisciplined, nor was he cruel. Most of the other ethics that I feel are related to this case and those reasons are listed in the paragraph above, these are the ethics from the IEEE Code of Ethics and the 5 P's.

In conclusion, engineering is a balancing act between ethical innovation, public safety, and a willingness to serve. Our desire to serve the public needs to be done so in a safe, effective and ethical manner. A standard, agreed-upon Code of Ethics enables us to build a better tomorrow.