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Ethical Dilemmas in Computer Science

Some of the main ethical dilemmas that I will end up facing in my chosen field is going to be ransomware hacking, data breaches, and other cyberattacks which can lead to identity theft, fraud, spear fishing, etc. Since I will most likely be working with software programs, I would need to be aware of these dilemmas because it will not only be affecting me, but the company I work at, the companies that buy our product and their customers. All their data that is stored would be exposed to those with malicious intentions. It will also affect financial institutions and government agencies which then poses as a national security threat that can put the whole country in danger like a lamb surrounded by wolves (Sweeney). Hacking, though, does not just stop at data, it can also be used to hack into devices like a pacemaker which can then increase or decrease the shock level causing danger to fall on the person who has one (“Emerging Ethical Dilemmas in Science and Technology”). There are even threats of hacking into Tesla's, the car, where the anti-theft system can be turned off and the car unlocked (“The Big Tesla Hack: A Hacker Gained Control over the Entire Fleet, but Fortunately He’s a Good Guy”).

Even in the industry itself, there is a chance that an employee may steal from their own customers, since they would have direct access to their information, to benefit themselves (Berzai). This brings up the dilemma of privacy and how it can be violated. There is an issue where a program can end up gaining too much information and storing it which can then lead it to be vulnerable to hackers to access or even being sold to others without consent. An example of

this could be the scandal that Facebook had faced where its “users' data were being taken to build psychographic profiles of American voters (Maina).” This not only breaches the privacy of the users but their trust which could lead a company to its own downfall.

For one to prepare for these dilemmas is that there could be a two-factor authentication be put into the program so it will protect the users' passwords from being hacked and for better security of the data. A way to make sure that the employees themselves are not the ones stealing the data from customers is to check their computers ever so often (Martin). To overcome the dilemma of hacking and data breaching is to make sure identity theft services are available to the victims.

An example would be how back in 2020, the company Blackbaud had a data breach that ended up exposing a bunch of personal information like social security numbers, health information, passport numbers, credit card information, and much more. After the breach happened, they had to notify the affected customers to make sure they know they're susceptible to identity theft (Identity Theft Resource Center). I'm probably not prepared for these challenges a hundred percent, but that is something that I can pray about to mentally prepare myself. Another thing I can do to help prepare myself would be to ask for advice from co-workers and seniors to see how it was handled before and how they personally overcame it.

From the IEEE Code of Ethics, one principle is “to treat all persons fairly and with respect, to not engage in harassment or discrimination, and to avoid injuring others.” This can be supported by Bible scriptures since the Bible talks about treating people with kindness and love. In Ephesians 4:29, it says “Do not let any unwholesome talk come out of your mouths, but only what is helpful for building others up according to their needs, that it may benefit those who listen.” This correlates with the not engaging in harassment or discrimination of others because

doing so does not help anyone out and just makes people harbor bad feelings towards you. Other verses are Luke 6:31 “Do to others as you would have them do to you” and Luke 6:45 (NIV) “The good person out of the good treasure of his heart produces good, and the evil person out of his evil treasure produces evil, for out of the abundance of the heart his mouth speaks.” These scriptures are making sure that one is making sure that their heart is in the right place and don’t treat people unfairly and to cause them harm.

For the ACM Code of Ethics, a principle that can be related to the Bible is “contribute to society and to human well-being, acknowledging that all people are stakeholders in computing.” One verse that supports this is Titus 2:7-8 “In everything set them an example by doing what is good. In your teaching show integrity, seriousness and soundness of speech that cannot be condemned, so that those who oppose you may be ashamed because they have nothing bad to say about us.” By doing what is good then you are contributing to society and human well-being because of your good works are helping others. Another verse is 1 Corinthians 10:23-24 (NIV) ““Everything is permissible” – but not everything is beneficial. “Everything is permissible” – but not everything is constructive. Nobody should seek his own good, but the good of others.” This verse shows that we should do good for others which is helping society and that to make sure that if you’re doing something, then make sure its beneficial for everyone instead of basking in the benefits for yourself.

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