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### Ethics in Computer Science

As the computer science field rapidly developed throughout the twentieth century, it became evident that those working in computer science would face ethical dilemmas never-before-seen by those in any other field. These unique ethical dilemmas would result in the creation of two codes, the ACM Code & the IEEE Code of Ethics. These codes sought to set the ethical standard for those working in the computer science field. In the modern era, these codes have become even more important as nearly everything we do in our day-to-day lives can be, or is, done online.

Based on my research, I believe the biggest ethical dilemma I will personally face in cyber security will be privacy. I believe privacy will be the major ethical dilemma I face daily for a variety of reasons. One reason that I believe privacy will be the biggest ethical dilemma I face is due to the emphasis on protecting privacy in the various codes of ethics. The writers of the IEEE Code of Ethics stated that people working in computer science should strive “to hold paramount the safety, health, and welfare of the public... to protect the privacy of others, and to disclose promptly factors that might endanger the public or... environment” (Section I, 1). This statement is found at the top of the IEEE Code of Ethics, which highlights the importance of safety and privacy in the computer science (and by extension cyber security) field. The writers of

the ACM Code also had much to say about the importance of privacy, going so far as to write that “An essential aim of computing professionals is to minimize negative consequences of computing, including threats to health, safety, personal security and privacy” (Section 1.1). Furthermore, the writers of the ACM Code chose to include a whole subsection on the importance of privacy when making the ACM Code. In this subsection, the writers go on to proclaim that “The responsibility of respecting privacy applies to computing professionals in a particularly profound way.” (Section 1.6). In the same subsection, they also state that computer science professionals should understand the rights and responsibilities associated with the collection of personal information, only use personal information for legitimate ends without violating the aforementioned rights, and establish transparent policies and procedures that help people easily understand what data is being collected and how it is being used (Section 1.6). Similarly to the IEEE Code of Ethics, the ACM Code puts all principles relating to privacy in the first section of the code, which further underscores the importance of privacy in computer science. The British Computer Society also sees privacy as important, which is made clear by the BCS Code of Conduct. The writers of the BCS Code of Conduct declared that computer science professionals should “have due regard for public health, privacy, security and wellbeing of others and the environment” (Section 1a). Just like the ACM Code and IEEE Code of Ethics, the section regarding privacy is found near the top, which further shows the importance of privacy.

In my opinion, someone in the computer science field should prepare to handle and/or overcome the ethical dilemma of privacy by doing two things. The first thing someone in the computer science field should do when faced with an ethical dilemma is review one, or both, of the codes of ethics. This sentiment is shared by the writers of the ACM Code. In the preamble of the Code, they wrote that “The Code is designed to inspire and guide the ethical conduct of all

computing professionals...” (Preamble). The preamble of the ACM Code also states that the principles listed in the code have guidelines that help computing professionals understand and apply the principles listed in the ACM Code. Reviewing the codes of ethics provided by the ACM and IEEE when faced with an ethical dilemma is a good idea because it will refresh your memory to the many different responsibilities a computing professional has. In my opinion, the second thing that should be done when faced with an ethical dilemma is to think critically about the principles that the ethical dilemma touches on, and to think through the different courses of action you could take in response to the ethical dilemma. This, too, is supported by the ACM Code, which points out that “The Code is not an algorithm for solving ethical problems; rather it serves as a basis for ethical decision-making” (Preamble). This further supports my idea that when dealing with an ethical dilemma, one should consult one, or both, of the codes and use the principles within to guide their decision-making process.

In the ACM Code, principle 1.2 is about harm. The principle describes what counts as harm, what to do if harm occurs, ways to mitigate harm, and what to do if you see harm. The IEEE Code of Ethics has a similar principle (II. 9) that states one should avoid injuring others, their stuff, reputation, or employment by lying, being malicious, or physical abuses (Section II 9). These principles, whether intentional by the ACM or IEEE or not, are rooted in biblical teachings. This is best shown in the Book of Luke, where it is written that you should “Do to others as you would have them do to you” (*NIV Bible*, Luke 6.31). This verse calls on everyone to treat others as you want to be treated. Principles 1.2 and II. 9, in a less on-the-nose way, also encourage professionals to treat others as they wish to be treated. This is done either by preventing or mitigating harm, or by refraining from physically or verbally harming someone, their things, career, or reputation.



## Works Cited

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