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From Engineering: Duties to the Community

Engineering is among the most lucrative professions, apart from being an attractive and respectable career; many people adore engineers and look up to them as role models. Engineering is a marginal profession. Therefore, it impacts directly on the lives of people. Most of the activities engineers are involved with are fundamental and critical to human survival. Besides, the technologies they develop are indispensable in making daily activities easier and more convenient. Failure to observe ethical aspects in engineering can be detrimental. Huge financial losses and property may result. The results can also be so severe and can lead to loss of human life.

Software engineering is among the crucial disciplines in Engineering. Software engineers develop programs and applications that are used to run systems. Since these systems are imposed on the people, software engineers have a duty to protect their consumers. Since some of the projects they engage in are hazardous, software engineers should assess not only their safety but also the safety of the people before undertaking any project.

Due to the professionalism attached to it as a career, engineers are expected to act with respect to core codes of ethic. National Society of Professional Engineers clearly stipulates that under any circumstances, the safety of the people and the engineers is paramount and should be given priority.

Over the few years, software engineering has evolved to a professional career. Due an increase in demand for their services and many people joining the profession, ethical issues have become an integral part of the discipline. The essence is to uphold professionalism and quality services to the public. The code of conduct for software engineers emphasizes the primacy and well-being and quality of life towards the public.

One of the duties of software engineers to the public is to work consistently according to public interest. Software engineers should presume the position of the public before engaging in the project. They should ask questions like; what impact will the project have on the public? What can be done to improve the safety of the new software to the public? Has the public acquiesced to the project in question? Including the public in decision making is imperative as a duty to the community. Software engineering professionals also have an obligation towards the users of the products. For instances, if an airplane company hires a software company to install avionic package of software, the aircraft users who happen to be the flight crew are significantly affected by the software. Therefore, the software engineers working on behalf of the company have a moral duty to ensure that the software package is safe and user-friendly.

Computer professionals also have a responsibility to the community as a whole. Their operations have an impact on millions of users who rely on their services. For instance, the safety of the passengers in an airplane majorly depends on the credibility of the software engineers. In cases where the software engineers install faulty systems, loss of lives could easily result.

There are two primary reasons why most software engineers stray from the set code of ethics. The first reason is over-confidence. Having extreme confidence without taking necessary precautions puts lives of people at risk. The other reason is excitement about a new invention. The anxiety to see one's work selling out to the world may lead to the release of incomplete software that could turn out to be faulty.

Software engineers are also obliged to provide high-quality products to the market as a duty to the users and public at large. Provision of sub-standard programs and software can both be damaging to the business involved and the user as well. Software with effect an on human life should not be allowed into the public domain without approval of the quality monitoring agencies.

Marginal professions are involved in context. Decision making in a marginal business requires following conscience apart from adhering to the set rules and regulations. Software engineers have specific roles to play in dispensing their services. The roles come with ethical obligations and responsibilities. For example, for software engineers contracted by enterprises to perform computer-related activities on the behalf of the corporation, their operations are guided by the company. They merely execute the decisions made by the corporation. As much as this is an important way of enhancing their responsibility towards the client, it impedes their capacity to perform. On the other hand, if the software engineer makes all decisions regarding software, the customer is left out and does not have an opportunity to include any specialized knowledge they may have about the software.

Computer technological advancements are being adopted daily in all walks of life. From education sector, national defense, communications, and entertainment. Having such an enormous public impact calls for the development of social ties with the public at large. Developing a working code of ethic is paramount. Also, the current

professionals have the duty of educating future professionals about the need for responsibility in executing their duties.

Software engineering can easily be manipulated as a weapon for mass murder. Since software programs are used in sensitive centers such as nuclear power plants, space ships and medical services, incompetence, negligence and irresponsibility can give room to acts of terrorism.

A pointing scenario in software engineering is software piracy. This is the act of deliberately copying and distributing software illegally without copyrights. Ethically, software piracy ethics can be approached from different perspectives. Individuals involved in software pirating argue that it is morally acceptable to do so while individuals involved with the protection of software copyright against pirating argue that it is unethical to pirate other people's software for personal use.

Those who claim that software pirating is legal have different grounds to defend their position. Their opinion is that all people have a right to access information and that information should not be made individual. They believe that reproducing as well redistributing already existing software is acceptable and should be approved by the copyright law. To them, redistribution of the illegal software is a form of self-expression, and it is a right that should not be encroached on. In the world of commerce, software is considered to be created by a team of individuals within a corporation. However, the name and copyright of the software does not go to the original writers of the software programs. Instead, the company takes the rights to the software. For this reason, most software developers have held the view that pirating the software should be their legal right.

Individuals involved in the protection of software against piracy support the law to copyright. They have the belief that software should be different and the individuals who develop this software possess the legal right to redistribution. Software piracy has resulted in a massive monetary loss of approximately 12 billion dollars, and job losses approximated to be 100,000. Major attraction into the software pirating scam is mainly due to the ease of copying already developed software as opposed to developing one. Moreover, it is considered safe since there is considerable anonymity. Other individuals will engage in pirating because it is cheaper to acquire the software through pirating an existing one as opposed to purchasing new software.

Software pirating denies original software developers their hard-earned wages and the right to benefit from the software. Software pirates claim that the software are sometimes too expensive or buggy and since they do not use the often, they have a right to pirate. However, this does not give them a right to copy other people's software for individual gain.

Many scholars classify software piracy as a form of plagiarism and high magnitude theft and that the practice should be treated with contempt. Ethics and conscience are the guiding principles needed to resist software piracy since the method is considerably anonymous with very minimal chances of being traced.

Possible Consequences of Software Piracy

Due to the billions of revenue lost through software piracy, there is a likelihood of a reduction in the number of new software being developed. Talented and experienced software developers are no longer motivated by creating new programs since they no longer benefit directly from them.

Prices of newly produced software are likely to go up compared to their current value. This is a strategic plan by software developers to earn higher initial revenue before the software is copied. For instance, Wolfman's Mathematica software that was valued at $795 in 1989 has increased in price over the years.

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