

Introduction

In the year 2000, Sourour, a young developer, was tasked with creating an online quiz for a pharmaceutical company's website. The quiz aimed to guide teenage girls toward a specific medication while presenting itself as a general information resource rather than an advertisement. It asked users a series of questions and recommended a particular drug based on their responses. However, the quiz was structured in such a way that nearly every answer led to a recommendation for that specific drug, except in cases where users indicated allergies or prior use. Despite understanding the ethical implications of promoting a medication in a misleading manner, Sourour complied with the client's requirements and implemented the quiz as specified. The situation escalated when he learned about a tragic incident involving a young girl who had taken the drug and subsequently committed suicide, shedding light on the severe side effects associated with its use. This case raises significant moral questions regarding the responsibilities of developers in healthcare marketing and the ethical dimensions of their work. In this Case Analysis, I will argue that virtue ethics demonstrates that the code was morally problematic because it lacked a commitment to the well-being of users and that Sourour should have acted differently by questioning the ethical implications of the project and advocating for transparency and responsibility.

Central Concepts from the Codes of Ethics

Professional codes of ethics, such as those established by the Association of Computing Machinery or ACM for short, and other organizations emphasize core principles including integrity, responsibility, and the health of the public. These principles stress that computing professionals should contribute positively to society and avoid causing harm. In Sourour's case, the quiz that primarily promoted a specific drug while disguising itself as an informational tool, Sourour violated these ethical principles.

The ACM's code of ethics specifically states that computing professionals should avoid harm and contribute to society. The quiz Sourour developed effectively directed young girls toward a medication without full disclosure of its risks. By failing to acknowledge the potential harms of his coding decisions, Sourour acted contrary to the values of responsibility and integrity advocated by the ACM.

Analyzing this case we can consider how virtue ethics helps elucidate the moral failings of Sourour's actions. Virtue ethics focuses on the character traits of individuals rather than solely the consequences of specific actions. Key virtues relevant to this context include honesty, courage, and empathy. Sourour's willingness to execute the project without question shows an ethical implication that lacks the courage to confront

potentially harmful practices. By prioritizing job security and compliance over ethical considerations, he failed to embody the virtues expected of a responsible professional. Moreover, the trust placed on professionals, especially in the field of healthcare, is particularly significant. Developers have a responsibility to ensure that their work does not mislead users, especially when health outcomes are at stake. Sourour's decision to proceed with the quiz highlights a failure to live up to this trust, as it prioritized the interests of the client over the well-being of the users.

Analysis Using Armstrong's Concepts

In her work, Armstrong discusses the importance of professionalism and emphasizes that professionals hold a special trust with the public. This trust obligates them to act in the best interests of those they serve. The relationship between developers and users is inherently one of trust, particularly in fields like healthcare, where the consequences of misinformation can be dire. Sourour's actions, driven by client demands, undermined this trust, as the quiz was designed to mislead rather than inform.

Analyzing this case through Armstrong's lens reveals that Sourour's primary duty was to the users of the website, not just to fulfill the client's request. Armstrong notes that professionalism involves a commitment to ethical standards that serve the public good. In this case, the quiz did not serve the best interests of the users, instead, it was used to promote a specific medication without proper consideration of the potential consequences. By failing to question the ethical implications of the project, Sourour neglected his responsibility to act as a professional who prioritizes the well-being of the community over compliance with client demands. The potential consequences of Sourour's actions were severe. Not only did the quiz mislead young girls into thinking they needed a specific medication, but it also could have contributed to a culture of distrust regarding healthcare information, especially in online website formats. When developers create systems that prioritize profit over people, they contribute to the mass amount of misinformation that is already out there on the web. This can have long-lasting effects on people. This is really concerning when it comes to healthcare and pharmaceuticals, where people's health is at stake.

Ethical Responsibility of Developers

Sourour's experience serves as a cautionary story about the ethical responsibility of developers. In the tech industry, particularly in healthcare, professionals are often at the forefront of decisions that affect people's lives. This responsibility extends beyond mere compliance with client requests; it requires a proactive stance toward ethical considerations. Developers should feel empowered to question the ethical implications

of their work, advocating for transparency and honesty in their projects. One might argue that Sourour was just a young developer following orders from his boss and the client and that the ultimate responsibility lies with the pharmaceutical company. However, while it is true that companies often drive marketing strategies, people in those organizations, especially developers, have a moral obligation to speak up against unethical practices. A culture of ethical awareness must be cultivated within organizations, where employees at all levels are encouraged to voice concerns about potential harms associated with their projects. To mitigate similar ethical dilemmas in the future, organizations should implement clear guidelines and training that emphasize ethical decision-making in technology. This could include regular discussions about case studies, promoting awareness of the potential consequences of misleading information, and encouraging employees to consider the broader impact of their work on society. By fostering an environment where ethical considerations are at the forefront, developers like Sourour will feel more equipped to navigate the complexities of their roles responsibly.

The Role of Transparency in Healthcare Technology

Transparency is a crucial element in the ethical development of healthcare technology. In the case of the pharmaceutical quiz, the lack of clarity about the drug's side effects and the intent behind the quiz created an environment perfect for misinformation. Users, particularly vulnerable populations like teenage girls, deserve to receive accurate information that helps them make informed decisions about their health. This responsibility lies not only on the healthcare provider but also on the developers who create the platforms and tools that the healthcare companies use to get this information out to the public. One potential solution for enhancing transparency is the incorporation of clear disclaimers and educational resources within health-related technology or websites. Developers should advocate for features that allow users to understand the risks and benefits associated with any medication or treatment suggested by a platform. This could involve providing users with comprehensive information about potential side effects, alternative treatments, and the importance of consulting healthcare professionals before making decisions based on the results of an online quiz. Additionally, ethical guidelines should promote the idea that developers must prioritise users welfare above all else. This involves critically assessing the motivations behind projects and ensuring that marketing strategies do not exploit vulnerable populations. In Sourour's case, the client's desire to promote their drug should not have overshadowed the ethical obligation to provide honest and accurate information.

Ethical Awareness in the Tech Industry

The tech industry must prioritize ethical awareness and responsibility among its professionals. This involves not only individual developers but also organizations as a whole. By cultivating a culture that values ethical considerations, companies can help prevent situations like Sourour's from occurring in the future. This can be achieved through comprehensive training programs, open discussions about ethical dilemmas, and creating a safe environment for employees to voice concerns without fear of retribution. One approach is to establish ethics committees or task forces within organizations that focus specifically on evaluating the ethical implications of projects. These groups can help ensure that all new developments align with established ethical guidelines and contribute positively to society. Such measures can foster a sense of accountability among developers and encourage them to prioritize ethical considerations in their work. Furthermore, Industry-wide initiatives could promote a shared commitment to ethical standards. By collaborating with professional organizations, companies can participate in initiatives that aim to enhance ethical practices in technology. This collective approach can help raise awareness of the importance of ethical decision-making and encourage developers to start discussions about their responsibilities in shaping the future of technology.

Conclusion

In summary, applying virtue ethics and the principle outlined by professional codes of ethics illustrates that Sourour's actions were indeed morally problematic. He prioritized compliance and job security over the ethical implications of his work, leading to a potential misuse of his coding skills that could harm vulnerable individuals. The lesson from this case is clear, developers must actively consider the broader impact of their work and embody the virtues of honesty, courage, and responsibility. While some may argue that Sourour was simply following orders, the reality is that ethical responsibility lies on more than just the client it also lies with the professionals that created the platform. Furthermore, it is important for developers to reflection on their ethical decisions to make sure what they are doing is ethical and does not harm anyone for the profit of their boss or company. Ultimately, A commitment to ethical practices will not only protect individuals but also enhance the credibility and trustworthiness of the tech industry as a whole. By prioritizing ethical decisions developers can help build a future where technology serves the greater good, promoting well-being, rather than exploitation for monetary gain. As the field of software development continues to grow and evolve, the ethical frameworks that the developers should follow must evolve as well to help professionals in their decision-making process.