

The Ethical Dilemmas of HCI: Privacy, Bias, and User Autonomy in Digital Systems

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Abstract

Ethical considerations in Human-Computer Interaction (HCI) are crucial as technology increasingly permeates daily life. This article explores the complex interplay between technology design, user interaction, and ethical principles. It addresses key issues such as privacy concerns, data security, algorithmic biases, and the impact of technology on societal norms and values. HCI ethics encompasses a range of perspectives, including user rights, transparency in design, and the ethical responsibilities of developers and organizations. The article delves into case studies and theoretical frameworks that illustrate ethical dilemmas in HCI, highlighting real-world implications and potential solutions. Furthermore, it examines the role of regulation and policy in shaping ethical standards within the HCI field, emphasizing the need for interdisciplinary collaboration and ongoing dialogue among stakeholders. Ultimately, the article advocates for a human-centered approach to technology development, where ethical considerations are integrated from the outset to ensure that HCI innovations benefit society responsibly and sustainably.

Keywords: Ethical Dilemmas, Privacy, Bias, User Autonomy, and Digital System.

INTRODUCTION

Ethical Dilemmas

Human-Computer Interaction is a field of computer science which focuses on the parts on the front layer of a technology system like front-end in web applications. The UI/UX part of any tech software focuses on user engagement with the software in hand. As technology is gaining its continuing to advance in popularity, so is the need for Human-Computer Interaction (HCI hereafter). The design and interaction part of any technology has a significant role on individuals and society (Dipert, 2016). That is why a tech business and its HCI professionals must play their part in their respective solutions as positive as they can and have recognized its importance and its ethical impacts. This article explores the various ethical concerns inherent in HCI, emphasizing privacy, accessibility, user autonomy, dark patterns, the power and responsibility of persuasive design, implications of artificial intelligence, and the challenge for designers. The moral responsibility of HCI professionals and imagining the ethical HCI of tomorrow.

The major ethical dilemma that is rather relevant to HCI is the matter of how, and to a great extent what, personal data are gathered, retained, and processed. The programs and products of the modern world collect much data concerning people, and a significant part of it is collected without informing the owners of devices and accounts. Such information can be where you are or better still, all your health details as well as details of what you love to do. Ethical HCI can be defined to mean the following: users should have a precise understanding about the information that is being gathered from them. Other information is collected as well such as the personal information of the users, the location of the users and cookies from the browsers.

If you are an HCI professional and you are collecting data, you need the permission of the user. Applicants should be informed on how the owners of the data will use their data and where the data will be stored or kept. This is why having too much data sometimes makes people feel like they are being spied on, just like spying (Schoenherr, 2022). Ethical HCI requires a delicate approach, on one hand, it is essential to gather the correct data necessary for the application's proper functioning, on the other hand, it is very important not to intrude on the users' rights for privacy. Specifically, one must ensure that users are not made to feel uncomfortable or as if someone is watching them. After gathering the data with the user's consent, you will have to ensure that data is protected. This means practicing data security by protecting the data from being accessed by unauthorized personnel or violated, and improper use. This distorts the information to ensure that anybody with a sharp eye on it must be authorized to do so. This will also ensure that only the right people with the right level of authorization can have access to data (Hartzog & Stutzman, 2013). This includes periodic surveillance of the security system so that any faults can be detected and corrected. The data is owned by the user and he or she should have total control of the data. This means they should be able to modify or correct all the wrong information that has been provided in the list. Delist their data should they wish not to have it in the project anymore.

HCI is the interaction between people and computers or any other technology. In the context of HCI, accessibility translates to designing technology which individuals with some form of disability will find easy to use. This covers everyone with a disability, based on their sight, hearing or movement, and thinking abilities. Accessibility has two main components.

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Inclusive design is focused on the incorporation of technology such that it may be utilized by every person irrespective of the disability status. For instance, a smartphone with a touch screen friendly for the blind will read out whatever that is on the screen (Hoogeveen et al., 2023). Therefore, inclusive design aims at preventing altering physical characteristics as much as possible to allow as many people as possible to take advantage of modern advancements in technology.

Thus, the essence of universal design can be stated as the implementation of elements in products that are suitable to the greatest population possible. Ethical HCI puts into consideration all the users when producing technology, this is by use of principles of universal design (Vanderheiden, 2007). This means considering increasing the font size of the text or using contrast color. Using subtitles when a show cannot include closed captions or triggering visuals, providing visual and audio signals. Ensuring voice commands are available or having large buttons (Gajos et al., 2006). Gentle and free from complex terms, and the instructions to be followed must be simple. These are special tools that assist the disabled persons in undertaking similar operations as anyone else with the aid of technology. Some examples are. These speak the content on a screen for the blind to read. The following are some of the assistive technologies this speaks what you type and assists the people on wheelchairs or those who do not have hand ability to type for themselves. These are specific input devices that are designed to help people with disabilities who cannot use standard ones.

Ethical HCI makes it a point that assistive technologies (Norris, 2004) match well with the regular products. It also ensures that generating such beneficial applications is a concern, and new technologies are not a concern for anyone. Some examples of good inclusive and accessible design are for example: Web sites that can only be moved from link to link with arrow keys on a keyboard. Applications that adapt in their organizational structure to suit the needs of the challenged users. Other types of games that have choices that allow for difference levels to be created for different types of players. Technological inclusiveness is vital because the world should not be a place where someone is left behind. It is so important to allow everyone to use computers and benefit from computers irrespective of their abilities.

Equity and Digital Divide

Equity and digital divide (Johnson, 2013) demands from HCI to follow below points: Digital divide is ability to differential people on the basis of their ability to use modern technology. These are computers, smart phones and the internet among others. Ethical HCI for the purpose of eradicating such a gap. It seeks to ensure that regardless of a person's well-being status, geographical location, or ethnic origin, one can leverage technology. One giant cause for this is that technology is not cheap and it is not present in all areas. Regarding the costs, ethical HCI should consider the price of the existing technologies and how accessible they are. Here are some ways to address these issues: Here are some ways to address these issues: Efforts into using BBI to reduce the cost of high-quality products such as computers, Smartphones among others.

See that connectivity is provided for all regardless of the area they live in, or their income level and that high-speed connectivity is provided. Give areas like library or community halls for people to have access to computers and internet for free. To ensure that people get the most out of technology, they offer courses and training to enable them to learn how to use the technologies. Thus, there have to be specific actions in order to reduce the gap, with regard to the individuals most harmed by it. This includes public authorities can come up with specific legislation that helps to develop cheap technologies and connectivity for all population (Fogg, 2002). These organizations can offer their resources and support to those communities that are in need. Businesses need to assume the responsibility of ensuring that their products become available in the market, especially to the low-income earners. Local programming may also reach out to at risk populations and aid in educating them and providing for them technological access. Even look for educational materials and gain better skills. Employment and work from home opportunities. How many times have you texted with your family and friends today? Access online services like banking, healthcare, and government services.

User Autonomy

User autonomy in HCI means letting people make their own decisions about how they use technology. People should have their freedom of choice. This means that users should be able to adjust settings to fit their needs, like changing the brightness of the screen or turning notifications on and off. Users should be able to change how things look and work, such as choosing different themes or layouts. Users should have control over how they use the technology, like deciding which apps to download or which features to use. Ethical HCI should give power to the users. This means: Providing users with real options that matter to them. For example, letting users choose how much data they want to share with an app.

Allowing users to set and keep their own preferences, like saving their favorite settings. No Interfaces should not trick or force users into doing things they do not want to do. Instead, they should support users' independence and freedom. (Kuss & Griffiths, 2017) Dark patterns are tricks used in design to make users do things they might not want to do, like: Signing up for services without realizing it because the option to decline is hidden or confusing. Giving away personal information without knowing because of tricky wording or unclear options. Ethical HCI calls for getting rid of these tricks and using honest, clear design practices. Technology can greatly affect mental health. Ethical HCI should think about how design choices impact users' minds (Tversky & Kahneman, 1981). This includes avoiding Psychological Impact features that: Making users spend too much time on their devices with endless scrolling or constant notifications. Stressing users out with too many notifications or complex interfaces that are hard to understand. Designs that can make users feel lonely or sad, like seeing only negative news or harmful content. Ethical design should include features that help users feel better, such as: Apps that help users relax and stay mindful, like meditation or breathing exercises. The way social media and communication platforms are designed affects how people interact with each other. Encourage users to be kind and

supportive, like features that let you thank or compliment others. Help users connect and create positive relationships, like groups for people with similar interests. Stay away from features that cause hostility, spread false information, or create division among people, like algorithms that only show extreme or divisive content.

Dark Pattern

Dark patterns refer to deceptive design techniques used by digital products, websites, or applications to manipulate users into taking actions they might not want to take. These design choices are often meant to benefit the website or product owner at the expense of the user's interests. Dark patterns can range from subtle tactics to more overt forms of manipulation, all with the aim of tricking users and influencing their behavior. In this comprehensive guide, we'll explore various types of dark patterns, their implications, and why ethical design is essential in combating them. This is where forceful action is taken whereby the users have no direct say of having to perform certain activities (Jovanović et al., 2021). Some of these practices include substantiating user registration of newsletters, placing items in the user's shopping cart without their consent or making it hard to opt out of services. These strategies deny user control and they can lead to frustration and distrust. This is a form of deception meaning that one is slimmed down without revealing the true cost of a particular product or service by the use of small print, additional charges, or check boxes that are already marked. An example of where users may be charged extra but are not initially aware of it may cause feelings of have been deceived and hence dissatisfaction. Misleading information subtypes include giving the wrong or falsely colored information with the specific aim of swaying the user.

This can range from misleading headline texts to fake sense of urgency to even overstated benefits of the products being sold. Such tactics demoralize the users and lead to the creation of structures which are unhelpful to the users thus making decisions unfavorable to them. Bait and switch strategies give the user a choice of a product or service they want while only providing them with an option that they do not prefer once they make their decision. This may entail positioning a product at a cheaper price; however, when buyers get to your online store, they find that the product is expensive due to hidden charges. The audience gets the feeling that they are being ripped off and may perceive the brand or product negatively. There is the practice of what is referred to as social proof manipulation in which the site creates or presents fake social proof. Thus, by providing fake popularity or credibility, businesses influence users' decisions based on fake data.

Ethical Concerns

Dark patterns raise significant ethical concerns due to their deceptive and manipulative nature (Shklovski et al., 2014). By exploiting psychological vulnerabilities and circumventing user consent, dark patterns undermine the principles of transparency, autonomy, and fairness in user experience design. Users may feel exploited, dis-empowered, and distrustful of digital products and services, leading to negative outcomes for both individuals and businesses.

Ethical design principles emphasize the importance of transparency and accountability in user interactions. Users should be fully informed about how their data is collected, stored, and

used, and they should have the ability to control their privacy settings and preferences. Additionally, businesses should be accountable for their design choices and the consequences of those choices on user well-being. Ethical HCI promotes user empowerment by providing meaningful choices, respecting user preferences, and prioritizing user autonomy. Designers should prioritize user needs and preferences over business interests and avoid using dark patterns to manipulate user behavior. By empowering users to make informed decisions and maintain control over their digital experiences, designers can create more ethical and user-centered products and services. Dark patterns can have serious implications for user well-being, including increased stress, frustration, and distrust of digital platforms (Fogg, 2002). Users may experience feelings of manipulation and exploitation, leading to negative perceptions of the brand and decreased engagement with the product or service. Furthermore, dark patterns can perpetuate inequalities and exacerbate social divisions by disproportionately affecting vulnerable populations.

To mitigate the impact of dark patterns, designers and businesses must prioritize ethical design practices and adhere to established guidelines and standards. This includes conducting rigorous testing and validation to ensure that design choices are fair, transparent, and aligned with user preferences. Additionally, businesses should establish mechanisms for user feedback and complaints to address concerns and improve user experiences.

Educating users about dark patterns and their implications is essential for promoting digital literacy and empowering individuals to make informed decisions online. By raising awareness of common deceptive tactics and providing resources for recognizing and avoiding dark patterns, users can better protect themselves against manipulation and exploitation. Persuasive design is a way of designing digital products, like websites or apps, to influence what users do. Designers use different elements like visuals, words, and understanding of how people think to encourage users to take certain actions (Nissenbaum, 2011). These actions can be as simple as clicking a button, signing up for a newsletter, or buying a product. Persuasive design can be very helpful. For example, it can Apps that remind you to drink water or exercise. Websites that help you make environmentally friendly decisions. Designers use knowledge of human psychology to make interfaces that are easy to use and engaging. This can lead to positive outcomes not just for users, but for society as a whole. However, persuasive design can also be a negative technology because people can also use designs that can harm others. Some examples include Games and apps that are supposed to serve as your companions. Schemes that confuse users into performing actions they did not intend to perform e.g. sign up for a certain subscription or service. These tactics can deny you specific rights and freedom that you would otherwise exercise and make one feel helpless or like a victim of manipulation.

Visual design involves using colors, shapes, and layouts to guide users' attention and influence their actions. For example, a bright, attractive button can encourage users to click it. Copywriting involves using words to persuade users. For example, using friendly encouraging language can make users feel more comfortable and willing to take action. Understanding how people

think and behave is key to persuasive design. For example, knowing that people are more likely to act when they feel a sense of urgency can help designers create effective prompts. Designing products to be addictive takes away user freedom. This can lead to negative consequences like decreased productivity and increased stress. Dark patterns are design tricks that deceive users. Examples include hidden costs, misleading information, and forced actions. These practices can lead to users feeling tricked and losing trust in the product or service. Conducting user research helps designers understand user needs and preferences. This ensures that design choices are user-centered and not just focused on business goals. Consulting with ethics and human rights experts helps designers consider the broader impact of their choices. This helps avoid creating harmful or exploitative systems. Designers and companies must commit to ethical principles. This means prioritizing user freedom and well-being over-term business gains. Respecting user freedom involves giving users control and avoiding manipulative tactics. This leads to more positive user experience and long-term success for the company.

AI and machine learning are increasingly used in HCI. They help in many areas like recommendation systems (suggesting movies or products) and autonomous decision-making (making decisions without human help). However, these AI systems can have biases because they learn from data that may already have biases. This can lead to unfair outcomes. Ethical HCI requires making sure that AI systems are fair and do not have biases. Using data that represents all kinds of people, not just one group. Continuously testing AI systems to find and fix any biases. Regularly checking AI systems to ensure they do not develop new biases. If AI systems are biased, they can make unfair decisions. For example, an AI system used in hiring might favor one group of people over another. Ethical HCI wants to prevent this by ensuring that AI systems are fair to everyone. Users should know when they are interacting with AI. This means: Telling users when AI is being used, like when a chatbot is not a real person. Providing explanations for how AI makes decisions. For example, if an AI recommends a movie, it should explain why it made that choice. If something goes wrong with an AI system, there should be clear guidelines on who is responsible. This means Users should know what to do if an AI decision harms them. For example, if an AI makes a wrong medical diagnosis, there should be a way to challenge and correct it.

Creating rules and guidelines to ensure AI systems are used responsibly. Transparency and accountability help build trust. Users are more likely to trust AI if they understand how, it works and know that there are ways to address problems. Ethical AI in HCI often means keeping humans involved in decision-making. This ensures critical decisions are made with human oversight, not just by machines. For example, an AI might suggest medical treatment, but a doctor makes the final decision. Users can step in and override AI decisions if necessary. This is important in situations where AI might make mistakes. Fully autonomous systems, like self-driving cars or AI-powered healthcare diagnostics, raise important ethical questions: Who is responsible if something goes wrong? For example, if a self-driving car causes an accident, is it the car manufacturer's fault or the software

developer's fault? How much control should users have over autonomous systems? Should they be able to take over if they feel unsafe? Ethical HCI practices advocate clear guidelines on these issues. This includes Gradually integrating autonomous systems into society to ensure they are safe. Establishing clear lines of responsibility and ensuring that there are ways to hold parties accountable. Autonomous systems can greatly improve our lives, but they also come with risks. Ensuring ethical practices helps minimize these risks and builds public trust in these technologies. Imagine an AI system used by banks to decide who gets a loan. If this AI system is trained on data where certain groups of people were unfairly denied loans in the past, it might learn to do the same. This means people from these groups might still get denied loans unfairly. Use data that includes fair treatment of all groups. Test the AI regularly to find any biases. Keep checking the AI to make sure it stays fair over time. This is important because everyone deserves a fair chance to get a loan based on their financial situation, not on biased data. Imagine you are using a music app that recommends songs to you. You should know: That the recommendations are made by AI. Why does AI think you will like a particular song (e.g., "You liked this similar song"). If the app recommends a song, you do not like, you should be able to tell the app you do not like the song. Know why the recommendation was made so you can correct it in the future. This helps build trust because you understand how the app works and can make it better for you.

Consider an AI system used in hospitals to help diagnose illnesses. The AI can suggest possible diagnoses based on symptoms, but a doctor reviews the AI's suggestions and makes the final decision. If the doctor disagrees with the AI, they can choose a different diagnosis. This ensures that important health decisions are not left for AI alone and that experienced professionals are making the final call. Think about self-driving cars. These cars can drive themselves, but there are important ethical considerations: If the car gets into an accident, who is responsible? The car owner, the manufacturer, or the software developer? Should the car have an option for the driver to take control if something goes wrong? Ethical HCI practices suggest: Slowly introducing self-driving cars to ensure they are safe. Setting rules on who is responsible for what. This helps ensure that the benefits of self-driving cars, like reducing accidents and traffic, are achieved safely. It is a challenge for them to find a way to serve business needs as well as user liberties. While it is correct to design attractive and efficient interfaces capable of leading to the desired effects, it is just as correct to pay sufficient attention to the fundamental right regarding the freedom of decision of other individuals and ownership of data. Cross-cultural data collection should be clear with the data they are trying to gather and how they plan on using the data. Allow the users to click on the links provided and exclude or modify their options with ease. It helps in the establishment of trust and a positive customer product relationship since users are bonded to the product. Consider how a certain approach to design might either empower or restrict the users, limit their privacy or negatively affect their well-being¹⁶. Introduce user research and seek advice from the ethics committee and officials knowledgeable about human rights. This helps in ensuring that

there is no New Tech that you create which can end up harming or exploiting the users you are developing.

Designers as well as the companies they represent possess considerable influence and control over such a picture. They need to: Follow ethical principles. Respect users' freedom. Design interaction features that are not only functional but also enfranchising. This is the amount of decision-making powers the users of a product or the consumers have in their dealings with the product or service. For instance, the ability to select preferences in settings or know what information is inputted into their accounts. These, for instance include the generation of higher revenues, increasing the level of customer satisfaction or the market share etc. Sometimes, user freedom and business goals can clash. For example: If a company wants to maximize revenue, it might limit user freedom by using tricky pricing models or restrictive policies. This can lead to negative user experiences and lower customer loyalty, hurting the company in the long run. Prioritizing user freedom can lead to higher customer satisfaction and loyalty. When users have control and can make their own choices, they are more likely to trust the company and stay loyal. This helps the company achieve long-term success.

Companies need to consider both user needs and business goals. Use user research, user-centered design, and ethical principles. Create designs that respect user freedom while also achieving business goals. The approach that has been presented therefore establishes clear moral responsibility of HCI professionals to design products that can significantly improve the quality of human life. To clarify, HCI specialists bear the specific responsibility of influencing the way people interact with technology. They shape the user actions, accessibility, privacy and, all these encompassing the overall user experience. Captivating as it may sound, the work of HCI professionals entails a high dose of moral responsibility, given the extent of their designs' influence. To begin, it is imperative to define the core concept of HCI and its fundamental principle, which is user oriented-ness. By education, training, and professional etiquette, HCI specialists ought to create products that are easy to use, inclusive, and advantageous across the wide population. This relates to a user disability and needs for designing products that are equitable. Documentation, storage, and analysis of data acquired from users are also tasks that are frequently undertaken by HCI specialists. This is their preserve to safeguard this information and to see to it that users of the site are well informed on the use of their data. People's trust in the solution and data security are critical to providing transparency in data gathering processes. Dark patterns, which are deceptive design patterns conceived by designers to trick people into doing what they would not do if they were of sound mind, is highly unethical. Current and prospective HCI specialists should abstain from such approaches and keep an eye on the establishment of informative and restrained patterns. Everyday ethical design practices emancipate users and build trust or as I like to call it – 'ethos'.

Other crucial dimensions include Since HCI professionals are designing interfaces that will be used by different people, they have to be sensitive to the general society impacts that their work will have. Mental health means of communication as well as the

culture of people's interaction can be influenced by the use of technology (Friedman et al., 2008). Away from politics and fashion exhibitions, designers should aim at producing items that make people healthy emotionally, physically, and socially. This is an area that comprises the level of addiction prospects as well as how to eliminate them.

It is recommended that every professional working in the HCI field follow a code of ethics that entails responsibility for one's work, honesty in work practice and neutrality towards the users. They must be ready to take full responsibility of their tasks, as they are expected to practice professionalism in terms of updating their knowledge and skills as they tackle growing ethical issues in technology. On this background, it is possible to qualify the development of technology and its intensive integration into all spheres of human activity as a significant reason for the appearance of new and the complication of existing ethical issues in the context of the HCI field. Thus, to manage the presented challenges and encourage the creation of ethical technologies, future HCI practices need to change. Here are several key directions for the future of ethical HCI practices: Here are several key directions for the future of ethical HCI practices.

Data privacy is a very valued aspect particularly in the modern world. Regularity and confidentiality in handling a user's information is crucial in the design by HCI professionals. Future practices should emphasize: Privacy by design as a principle of incorporating privacy features right from the development phase of technologies (Kuniavsky et al., 2020). Engaging the users, through privacy choices that are simple and easily understood by the end user such as privacy controls and consent. The basic principle of your users being aware of what data is gathered, what it is gathered for and who scrutinizes it. In offering a brief on the role of capacity for the development of technology we see that the ability of technology meets people's needs without prejudice to their disability or status asrefugees is imperative. Future HCI practices should include Designing products that should be at the same time usable by most of the people without requiring much adjustment. Building interfaces that can be tailored to the various users and especially those that belong to the disabled category. Introducing technology, which complies with the concerns of civil, social, official and personal cultures.

Since AI is rapidly progressing to become more involved in the user interfaces, proper inclusion of ethical AI practices is crucial. This involves intentional efforts to eliminate how preconceptions can be at work in databases and the algorithms themselves. Ensuring that AI systems are explainable to the user through including the reasoning that led to a certain decision and also including an option where the user will override the decision that has been arrived at by the AI system. The provision of methods to challenge and even reverse what an AI system has done and provide accountability for the decision made by the system. Beneficial technology is the one that can contribute to the improvement of its users' health. Future HCI practices must focus on: Developing features that restrict the usage of the application in the way it would limit the use of technology in a particular day such as the screen time, which notifies the user after a certain screen time, to log out of the application. Information concerning

one's decisions and how some designs influence mental state to that of stress, anxiety, or depression. Promoting positive use of social media and social connections and at the same time safeguarding against negative uses including embarrassment and abuse.

CONCLUSIONS

To ensure ethical practices are upheld, the HCI community must establish clear guidelines and prioritize education Promoting and following significant ethical codes that describe the obligations and the principles of professionals in the field of HCI. Developing ethical issues into the HCI curriculum or incorporating the ethical issues into the education or training programs of the future generation designers and developers. I am also calculating encouraging people to carry on their education about new ethical issues as new innovations developed. Involvement of the users in the design process could go a long way towards improving the general ethicality of designs that are developed in society. Future HCI practices should: Focus on users in the design processes by coming up with workshops, focus groups, and testing phases to get various views of the users. Engage with users or customers, especially those from the minority or those with disabilities who are mostly neglected when developing the products. The use of technology has environmental consequences and understanding these consequences is one of the relatively recent trends in the ethical analysis of technology. Future HCI practices should: Focus on those solutions with the least impact on energy consumption and the environment by attempting to avoid waste in general. Explain each phase of a product's life cycle to assess the possibility decisions will lower its impact on the environment (Kuniavsky et al., 2020). Create interfaces that use a set of prompts influencing the users' choice towards more sustainable decisions, for example, energy saving or supporting green policies.

HCI has brought information regarding several factors that are essential for designers; the ethical consequences of decisions made throughout the process are more easily investigated today than in the past. With technology growing to be an intrinsic part of society, the roles and tasks of an HCI professional are not limited to usability and feasibility. They have to cope with numerous moral issues concerning privacy and security, non- discrimination and the users' self-determination. Such concerns include the practices of dark patterns, one's ability to control their behaviors, the effects of design on mental health, and the/implicit biases of AI algorithms. Thus, ethical HCI includes the concept of responsibility towards the users and the society, as well as the role of honesty and fairness. The professionals in this field are required to remain privacy by design, work for the best accessibility design, and work for a fair algorithm design that can compromise discrimination. Letting users participate actively in the design process and including a more significant number of people in the process will result in better solutions and more consideration of users' needs who may otherwise be marginalized. Moreover, objectives related to EBC members' digital well-being and minimization of the adverse social consequences, including cybersecurity risks and fake news, are critical for EBC members. There is still an implication that the humanity of HCI is the management of business value while not steering people into

pitfalls that produce misuse for monetary benefits. Future HCI practices should: Thus, the identified ethical issues in HCI suggest that, first, HCI needs an organized and systematic approach to the problem, and second, there are better and worse ways of designing technology. Thus, the role of the HCI professionals is to design technologies that not only bring novelty, convenience and usability, but that also do not violate basic human rights or societal norms and values when following ethical guidelines, encouraging users' participation as well as promoting sustainability. When it comes to the vision for the future of HCI, it implies that technology should be created in such a way that it brings out a positive change in people's lives and is created in a safe ethical manner from conception through to its deployment, in a quest to create a just and fair digital society.

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