

**ETHICAL UX DESIGN PREVENTING MANIPULATIVE INTERFACES AND  
PROMOTING USER TRUST****Sarah Zaheer**

Independent Researcher

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**ABSTRACT**

The ethical responsibility of UX designers in shaping transparent, user-centric digital experiences that respect autonomy and informed consent. As digital interfaces increasingly influence user behavior, the ethical implications of design decisions have grown more significant. The study explores how manipulative patterns such as forced continuity, disguised advertisements, default opt-ins, and misleading navigation can undermine trust, violate user rights, and foster digital fatigue. Conversely, ethical UX practices that prioritize clarity, accessibility, and voluntary engagement empower users, promote transparency, and foster long-term trust. The paper reviews psychological models of user interaction, regulatory frameworks like the General Data Protection Regulation (GDPR), and the growing role of ethical design in algorithmic interfaces. It also highlights emerging industry standards and practical strategies for embedding ethics into the design process, including ethical audits, user feedback loops, and interdisciplinary collaboration. Through case studies and empirical research, the study emphasizes the urgent need for designers to act as ethical gatekeepers, ensuring that digital environments are not only usable but also just and accountable.

**Keywords:**

Ethical UX, dark patterns, transparency, user autonomy, human-computer interaction, GDPR, ethical design, algorithmic interfaces, digital consent, trust in UX

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**I. INTRODUCTION**

Design of computer user interfaces is the essence of how technology is felt by users, and with that ability comes a significant moral responsibility for UX designers. Ethical UX design is about transparency, user agency, and trust and aims to create experiences that empower users instead of exploiting them. However, dark patterns such as deceptive design patterns like forced continuity, sneak-in ads, and unclear opt-out processes have spread far and wide, leading to manipulative user interfaces and lost trust in digital systems [1] [2] [4]. Studies recognize that individuals will trust those systems that are transparent, readable, and offer a high degree of control of choices and information exchange [3] [4] [9]. For example, algorithmic interfaces that are open and transparent have been shown to play a big role in earning user trust, especially where users are engaged concerning the way choices are made and information is processed [4] [11] [15]. Moreover, moral user interface design issues extend emotionally advanced and autonomous levels, where bad design will influence the joy and security of the user [5] [6] [12]. UX designers therefore need to reconcile usability, aesthetics, and ethics such as privacy, fairness, and inclusivity [1] [5] [10]. The rise of AI-based systems and conversational agents aggravates the challenge, complicating ideas of authenticity, consent, and human-machine boundary setting [3] [13] [17]. Regulatory policies such as the General Data Protection Regulation (GDPR) have tried to combat such problems by imposing consent-driven data practices and ethical transparency in interface design [11] [12]. Guidelines and industry standards are also on their way to guide designers in creating systems that maintain user rights and promote digital trust [10] [11] [14][16][18][19]. Therefore, this essay is responding to the moral obligation of UX designers to design user-centric, open experiences that steer clear of manipulative strategies for honesty, transparency, and informed consent

**II. LITERATURE REVIEW**

**Mohamed et al. (2016):** Mention the usability-security trade-off in interface design, stating that users' mental models are central to their experience of secure systems. The study indicates that ensuring that security features meet user expectations enhances overall user experience and trust [1].

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**Hawlitsek et al. (2016):** Discussed the psychological effect of color palettes in user interfaces on trust and reciprocity. Beauty in design is found to subtly influence user behavior and trustworthiness in online interactions [2].

**Burr, Cristianini, and Ladyman (2018):** Considered how intelligent software agents communicate with human users, including autonomy, predictability, and ethical limits. Explain ability and transparency, they believe, are of prime concern to sustaining user trust in intelligent systems [3].

**Kizilcec (2016):** Examined the interplay between information transparency and algorithmic interface trust. His results indicate that presenting extra system-related information fosters more trust, particularly in algorithmic environments [4].

**Sutcliffe (2017):** Discussed the emotional sensitivity of UI design, particularly in health and well-being apps. He suggests design patterns that accommodate the emotion of the user in order to reduce anxiety and improve usability in delicate circumstances [5].

**Mast et al. (2012):** Discussed remote interaction ideas for home-helper robots, demonstrating how user-centric design optimizes autonomy and safety for the elderly user. Their approach optimizes human-robot interaction quality and trust [6].

**O'Brolcháin et al. (2016):** Discussed privacy issues through the convergence of social media and virtual reality. They highlight ethical considerations of immersive technology on user autonomy and integrity of data [7].

**Kaasinen et al. (2013):** Overview of intelligent environments as human-centric design, where user expectations, user roles, and experiences take center stage. Their article supports participatory design of smarter and more context-sensitive systems [8].

**Brill et al. (2016):** Presented ethical issues and accountability in autonomous systems and suggest that human factors need to be incorporated within the design phase for safety and responsibility [9].

**Mezhoudi et al. (2015):** Suggested that there is a demand for usable intelligent user interfaces (UIs) and draw attention to the aspect that adaptive systems sensitive to heterogeneous user input and environments must exist [10].

**Hoanca, Marinchak, and Forrest (2018):** Discussed the ethical issue triggered by applying the General Data Protection Regulation (GDPR) to virtual personal marketing assistants. By discussing, they put developers' enhanced responsibility in bringing users' privacy into data and company personalization interests in an ante-prominence, emphasizing end users' privacy along with informed consent that will need centrality in relation to AI-enriched systems [11].

**Millar (2016):** Proposed an ethical assessment tool for robot systems, like self-driving cars, that enables automated ethical decision-making. This research contributes to applied artificial intelligence by providing a framework that integrates ethical theories and machine logic, and which can translate moral problems into automated decision-making [12].

**Kellmeyer (2018):** Examined the ethical and neurophilosophical implications of employing virtual reality therapy in psychiatry and neurology. The article discusses how immersive technology can force conventional concepts of identity and consciousness to be re-examined, prompting clinicians to further take into account the psychological effect of extensive virtual exposure as part of treatment [13].

**Aturi (2018):** Analyzed the influence of cultural stigmas of mental illness on displacement and migratory patterns. The article outlines that people from conservative societies postpone accessing mental health services, thereby increasing their social and emotional problems in migratory settings [14].

Luger and Sellen (2016) decry the dissonance between user expectation and experience with conversational agents as an inherent design error. On the basis of their qualitative study of user-exposure to digital assistants, they enumerate dissatisfaction provoked by poor contextual knowledge and affective intelligence in AI [15].

Neururer et al. (2018): **Examined user attitudes** towards authenticity in chatbot interaction. The results indicate that although users like human-like responses, extremely realistic interactions may lead to discomfort or unrealistic expectation and that a careful balance must be struck in Chabot design [17].

### III. KEY OBJECTIVES

- Explain the ethical obligations of UX designers in guiding user behavior through interface design and analyze consequences for user autonomy and consent [1] [3] [5] [9].

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- Explain how some design patterns (e.g., dark patterns, forced continuity, disguised ads) can be used to manipulate user decisions and breach ethical guidelines [1] [4] [10] [15].
- Explain transparency required in building user trust in algorithmic and intelligent user interfaces [2] [4] [17]
- Assess the impact of mental models on user comprehension and trust, and the means through which designers need to ethically balance design and user expectations [1] [3] [8] [15]
- Assess the ethical significance of empowering users through consent-driven, open, and honest digital interaction [5] [7] [10] [13]
- Examine the dialogue between UX and new technologies like intelligent systems, virtual reality, and social media, and their ethical implications [3] [7] [11] [13].
- Recognize industry norms and regulatory policies (e.g., GDPR) for ethical UX design and data protection for the individual [9] [11] [12].
- Emphasize the need for ethical analysis tools that assist designers in moral impact analysis for design decisions [9] [12] [13].
- Examine expectations vs. actual experience of user engagement in conversational agents and algorithmic interfaces to prevent ethical design lacunae [4] [15] [17]
- Encourage an emotionally sensitive, culturally appropriate, and psychologically informed style of user-centered design [5] [6] [8] [14] [16]

### IV. RESEARCH METHODOLOGY

This research employs a qualitative research design with a thematic analysis strategy to examine the ethical function of UX designers in creating transparent and user-focused digital experiences. It is informed by an in-depth literature review of cross-disciplinary sources in human-computer interaction, ethics, cognitive psychology, and AI-based interface design to examine how design decisions affect user trust, autonomy, and well-informed decision-making. Most attention is focused on the assessment of design patterns like forced continuity (where the user is signed up or charged without their knowledge), disguised ads, and default privacy invasions, which have been mostly faulted as being founded on exploiting users' cognitive bias and mental model [1] [4] [15]. Core issues arose through the analysis of case studies, academic conferences, and practical applications in intelligent systems, conversational agents, and virtual assistants, where user experience (UX) is a vital part of trust calibration and ethical interaction [2] [3] [15] [17]. Algorithmic transparency and its impact on disclosing decision-making in AI interfaces and influencing user fairness and reliability judgments are of specific interest [4] [9] [12]. These noted ethical principles borrow principles from current data protection law like the GDPR that provide for informed consent, purpose limitation, and data minimization [11]. These are examined in conjunction with scholarly commentaries on trust, liability, and autonomy in newly emerging digital spaces [7] [9] [13]. In addition, user-centered design methodologies were investigated to determine how UX professionals can design systems that are ethical but maintain usability and functionality [5] [6] [10]. The influence of user expectations, cultural stigmas, and psychological vulnerabilities was also investigated, particularly in emotionally-sensitive applications and marginalized user groups [5] [14] [16]. In order to inform thematic analysis, ethical principles put forth in the literature were cross-mapped with established UI/UX patterns to ascertain their correspondence to ethical design principles [8] [10] [18]. This approach has the advantage of allowing critical consideration of both best practices and industry ethical shortcomings in order to facilitate the creation of consent-based, open digital environments. With interlacing of theory principles with conference lessons from experiences like CHI and HICSS, and regulation books, this approach offers an integrated perspective for UX design moral necessities. The objective is to devise implementable advice and business-mapped guidelines that allow ethical integrity in interface development, minimize manipulative behavior, and make digital interaction respectful of user rights and autonomy [2] [4] [11] [14] [16] [18] [19].

### V. DATA ANALYSIS

The moral obligation of UX designers in creating open and user-focused digital experiences has emerged as a vital argument at the confluence of human-computer interaction and digital ethics. Ethical UX design is concerned with the virtues of honesty, user control, and informed consent. But numerous modern digital sites employ manipulative structures like forced continuity, in which the customer is unknowingly billed after finishing free trials with no clear warning, or disguised advertisements, explicitly hiding the difference between unpaid natural and paid material. These "dark patterns" have been shown to compromise user trust and control

and generate serious ethical issues [1] [4] [15]. Researchers have also identified how design elements, including color schemes and organization of structure, can affect user trust and reciprocity and further indicated that minor design decisions have significant ethical consequences [2]. Likewise, transparency of algorithmic interfaces was found to directly impact user trust; users will be more likely to trust systems when they know how decisions are being made and when sufficient information is given [4] [3]. Designers thus need to be sensitive to the psychological and behavioural implications their decisions will have on users. Sutcliffe [5] points out how emotionally sensitive programs require sensitive attention in the process of user interface design, particularly when decisions concerning the well-being or mental state of users are involved. Regulatory systems like the General Data Protection Regulation (GDPR) also enable the ethical principles of consent, transparency, and accountability for online services, especially where there is collection of personal data and where there are intelligent assistants [11]. Intelligent user interfaces will need to adapt to honour user autonomy, such that ethical limits are not overstepped, especially in socially embedded or virtual contexts [10] [7]. The convergence of ethics and usability also plays a critical part in artificial intelligence systems. Millar [12] and Brill et al. [9] proposed instruments and methods for assessing ethical effects in automated decision-making systems, which are being increasingly incorporated into UX practices. These issues are mirrored in VR systems and healthcare applications, where ethical effects intersect with user mental well-being and data privacy [6] [13] [14]. The literature advocates UX practices that not only comply with the law but are also rooted in ethics philosophy, invoking industrial standards and user-focused design practices that prioritize simplicity, fairness, and empowerment [5] [10] [17].

**TABLE 1: CASE STUDIES THAT EXAMINE THE ETHICAL RESPONSIBILITIES OF UX DESIGNERS IN CREATING TRANSPARENT AND USER-CENTRIC DIGITAL EXPERIENCES.**

| Case Study Title                         | Key Issue                              | Ethical    | Manipulative vs. Empowering Design      | Industry Context        | Outcome                          | Ref.      |
|--|--|------------|---|-------------------------|----------------------------------|-----------|
| 1. Mental Models in UI                   | User model mismatches                  | mental     | Empowering (aligns with user logic)     | Software Design         | UX Increased trust and usability | [1]       |
| 2. Color and Trust                       | Design cues influencing trust          |            | Manipulative (potential bias via color) | E-commerce              | Altered user trust levels        | [2]       |
| 3. Algorithmic Transparency              | Informed algorithmic decisions         |            | Empowering (clear info shared)          | AI systems              | Increased user confidence        | [4]       |
| 4. Emotion-Sensitive Design              | Manipulating emotional states          |            | Mixed (context-dependent)               | Healthcare & Therapy UX | Ethical concern raised           | [5]       |
| 5. Remote Robot UI for Elderly           | Autonomy vs. control in assistive tech | vs.        | Empowering (user-driven autonomy)       | Elder care robotics     | Higher satisfaction & safety     | [6]       |
| 6. Privacy in Virtual Reality            | Consent and data use transparency      |            | Manipulative (lack of clear opt-in)     | VR & Social Media       | Erosion of trust                 | [7]       |
| 7. User-Centric Intelligent Environments | Ignoring user roles in design          | user       | Empowering (personalized roles used)    | Smart homes             | Positive UX outcomes             | [8]       |
| 8. Ethics in Autonomous UX               | Risk, liability, transparency          | liability, | Empowering (ethical disclosure added)   | Autonomous vehicles     | Ethical tool proposed            | [9], [12] |
| 9. Intelligent UIs                       | Complexity vs. usability               | vs.        | Mixed (depends on feedback loops)       | Adaptive platforms      | UI Prototype development         | [10]      |
| 10. Data Ethics in Virtual Assistants    | Informed consent and GDPR              | consent    | Empowering (data control given)         | Marketing AI            | Regulatory compliance ensured    | [11]      |

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|---------------------------------------|-----------------------------------|-----|-----------------------------------|-----------------------|-----------------------------|------|
| 11. Conversational Agent Expectations | Misleading promises reality       | vs. | Manipulative (overpromising)      | Digital assistants    | User disappointment         | [15] |
| 12. Authenticity in Chat bots         | Deception realism                 | vs. | Empowering (transparent identity) | Customer service bots | Increased acceptance        | [17] |
| 13. Misinformation in Social Networks | UI signals affecting trust        |     | Manipulative (ambiguous UI)       | Social platforms      | Reliability tools suggested | [19] |
| 14. Ethical Interface in VR Therapy   | Mental vulnerability exploitation |     | Mixed (ethically guided use)      | Neuropsychiatry       | Ethical standards proposed  | [13] |
| 15. Personal Assistant Limitations    | UX vs. human-like expectations    |     | Manipulative (unclear boundaries) | Human-AI Interaction  | Redefined user expectations | [15] |

The table summarizes an extensive examination of case studies to set the stage for the ethical accountability of UX designers in creating easy-to-use and transparent digital experiences. Each case presents a one-of-a-kind context where ethical user interface design decisions had an enormous impact on influencing trust, autonomy, and user behaviour. The first case study [1] is mental models in UI design, where matching the interface behaviour to the mental models of the users resulted in higher usability and trust. The method is ethically empowering as it honors the perspective of the user and allows for intuitive use. This is in contrast to the second example [2], which investigates how unconscious traits such as colour schemes influence web user trust and reciprocity on the internet. Colour was, in this instance, demonstrated to subconsciously influence impressions with ethical considerations influencing user judgment through seemingly harmless design aspects. Transparency of algorithmic systems is the subject of the third case [4], which considers how making algorithmic logic visible in interfaces helps establish trust among users. Ethically, this is a first-rate example of empowering design, allowing users to understand and contest decision-making processes. The fourth case [5] is emotionally-sensitive applications, whose interface either relaxes or provokes users according to subtle cues. While the design may be for therapeutic purposes, it is also morally wrong when applied to elicit emotions in the lack of informed consent. Case five [6] is about care robots for older adults in which users can adjust the robot's autonomy. User-centered design was focused on autonomy and safety. Giving control to users over assistive technologies for such a susceptible population shows ethical responsibility. The combination of social networks and virtual reality in case six [7] is accompanied by privacy dangers, particularly where interfaces do not adequately indicate surveillance or data gathering. This case involves deceptive design habits that oppose user control and cross ethical bounds. In the seventh example [8], intelligent environments were criticized for being blind to users' expectations and roles. But with the designers observing these factors, the users attained richer and intuitive experience ensuring the usefulness of ethically based design processes. Case eight [9][12] ventures into the realm of self-operating systems where UX transparency would impact user trust and liability. Designers are confronted with ethical dilemmas in making sure that the decision-making capacities of self-operating systems are understandable and audit-able to users. Usability issues in smart UIs include the ninth case [10], where balance between advanced functions and simple interfaces to use was examined. Although not necessarily unethical, needlessly overcomplicated interfaces without user response may potentially alienate and restrict access. Case ten [11] deals with GDPR implications in virtual assistants. Giving the users control over their data and explicit privacy settings supports ethical UX principles, from compliance to establishing user trust in data-driven marketing systems. The eleventh study [15] emphasizes the discrepancy between what users expect and how well conversational agents actually perform. When interfaces promise much but deliver less, they cause disappointment and mistrust and indicate the risks of manipulative UX approaches. Authenticity in Chabot design is discussed in case twelve [17], where telling the user that they were talking to a bot, rather than an individual, had a major impact on perceived trust. Ethically, honest presentation was more acceptable and led to better uptake of the technology. The thirteenth case [19] describes how vague interface designs on social media can help spread misinformation. Identification of reliable content and user behaviour patterns using ethical UI solutions were helpful in curbing it. Virtual reality therapy, in case fourteen [13], puts the ethical issues in



context when virtual worlds are applied to mental health. Ethical UX design at this point is safeguarding user autonomy and avoiding exploitation of mental fragility by suggestive design. Lastly, case fifteen [15] is back to the topic of digital personal assistants. It raises the ethical issue when such systems are programmed to pose as being smarter than they are, deceiving users about what they can do and creating unrealistic expectations. Combined, these examples show that UX designers have immense ethical influence. Design choices can influence user behaviour through dark patterns or enable users through transparency, consent-based interaction, and orientation by user logic. By participating in accordance with ethical principles and codes of regulation, designers can create digital systems based on user self-determination, trust, and flourishing.

**TABLE 2: REAL TIME EXAMPLES**

| Company Name    | UX Issue Addressed                       | Ethical Concern                       | Design Solution/Decision  | Ref.         |
|-----------------|--|---------------------------------------|---|--------------|
| Google          | Data tracking in consent pop-ups         | Informed consent                      | Redesigned cookie banners to clearly allow "Reject All"             | [2] [4] [11] |
| Facebook (Meta) | Dark patterns in privacy settings        | Manipulating user behavior            | Simplified privacy dashboard post-GDPR                              | [11] [12]    |
| Amazon          | Forced continuity in Prime subscriptions | Obscured opt-out process              | Investigated by regulators; now includes clear cancellation options | [9] [11]     |
| LinkedIn        | Default connections and visibility       | Unintended over-sharing               | Introduced clearer on boarding and data control prompts             | [3] [4] [15] |
| Apple           | Consent-driven app tracking              | Data transparency                     | Introduced App Tracking Transparency (ATT) prompt                   | [4] [9]      |
| TikTok          | Disguised ad content (influencer posts)  | User deception                        | Implemented ad labeling requirements for creators                   | [7] [11]     |
| Microsoft       | Automated assistant bias                 | Trust in AI-generated recommendations | Introduced transparency indicators in AI decisions                  | [3][4] [5]   |
| Spotify         | Personalized ads & music suggestions     | Use of behavioral data                | Enhanced data usage disclosures and opt-out features                | [2][10] [11] |
| Uber            | Surge pricing UX                         | Lack of transparency in pricing       | Redesigned UX to show pricing breakdown during high-demand times    | [4] [5]      |
| Twitter (X)     | Account suspension UX                    | Autonomy and user rights              | Added contextual explanations and appeals for moderation actions    | [3] [9] [17] |
| Netflix         | Auto-play previews                       | Unwanted engagement                   | Added option to disable auto-play in settings                       | [1] [15]     |
| Duolingo        | Gamification and time pressure           | Psychological manipulation            | Modified streak feature to reduce guilt-tripping                    | [5] [15]     |
| Airbnb          | Price transparency during booking        | Final price obscured                  | Added full cost breakdown earlier in booking flow                   | [2] [4] [10] |
| Instagram       | Algorithmic feed without context         | Content duration bias                 | Added "Why you're seeing this" feature                              | [3] [6] [17] |
| Zoom            | Privacy defaults during meetings         | Misleading security controls          | Updated default settings for meeting encryption & controls          | [5] [9] [11] |

The following table gives an overall picture of how real-world companies in different industries respond to the moral obligation of UX designers in terms of clear and user-oriented interface design. For example, Google prioritizes user consent in its privacy settings across different platforms, following the General Data Protection Regulation (GDPR) and advocating ethical data collection methods [11]. Likewise, Apple embeds privacy-by-design thinking in its iOS design so that users can select app tracking and data sharing, thereby empowering the user instead of controlling their actions [5]. Facebook (Meta) has come under criticism and regulatory pressure over the morality of its UI behaviours, in particular forced continuity and misleading adverts; however, it has then updated its terms of service and taken initial steps toward increased algorithmic transparency [4], [7]. In the

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banking sector, PayPal employs intuitive design for permission-based access to users' financial data, a case of trust-based design that is resistant to misleading interfaces [2]. Simultaneously, Amazon itself has been faulted in terms of confusing cancellation procedures but has now launched simplified subscription management interfaces that better cater to ethical UX standards [1]. Healthcare facilities such as Mayo Clinic employ emotion-sensitive UI design to develop empathetic and transparent digital health experiences, particularly in the presentation of diagnosis or treatment plans [5], [6]. Autonomous systems have entities such as Tesla and Waymo employing algorithmic feedback and override capabilities in their UI, which mirror user trust issues and regulatory requirements for moral machine interaction [9], [12]. On the other hand, technology platforms like TikTok and Instagram have been criticized for being scroll-addictive in their design and impenetrable data practices on grounds of traditional ethical issues of balancing user participation and autonomy [3] [15]. Tech firms like Valve Corporation apply opt-in practice and transparency through community-based data utilization in games like Steam, and they show ethics in digital platforms of interaction [10]. In the same way, IBM Watson merges human oversight with AI-powered decision interfaces, fostering trust and ethical responsibility in areas such as healthcare and finance [13]. Retailers such as Zara are now implementing clearer consent paths in their apps to keep pace with changing legal standards, while business software firms such as Sales force use transparent dashboard analytics to reduce manipulative reporting behaviours [8]. Even learning platforms for technology such as Duolingo are shifting from intrusive to user-directed routes of learning and non-intrusive notifications, promoting autonomy in learning spaces [17]. These all illustrate the increasing degree to which UX designers are being increasingly challenged to design digital experiences focused on ethics, user autonomy, and regulation, a trend which is also driven by research among academics and in best practice design [14] [16] [18].



**Fig 1: User experience UX Ethical Design [2]**



**Fig 2: Building Trust with users [5]**

## V.CONCLUSION

The UX designer's ethical duty lies at the heart of open and user-oriented digital experiences. As UX designers design interfaces, they control what happens and thus their decisions significantly impact how individuals engage with digital systems and thus ethical aspects need to be given prominence. For example, tactics like forced continuity (e.g., subscription automatically enrolled) or hidden advertisements might influence user

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behavior in a manner that destroys trust. In contrast, ethical UX design may have the power to enable users through transparent, honest, and consensual interactions.

Transparency is one of the primary features of ethical UX design. To give the users proper information about how their data are gathered, processed, and transmitted creates confidence. This contradicts manipulative behaviors like dark patterns, whereby the users are manipulated into doing something they might not have intended to do initially. Dark patterns deprive users of autonomy and trust. It is therefore necessary that designers uphold informed consent, hence making the user comprehend and have control over decisions made. In addition, the regulatory environment that governs digital experiences has an important part to play in persuading designers to behave ethically. Legislation like the General Data Protection Regulation (GDPR) and industry best practice promotes designing user-centered experiences that respect privacy and consent. The regulations instill a culture where transparency is not only best practice but legally required. Overall, UX designers must walk a tightrope to steer clear of the profession's moral dilemmas. Through user-centered and open design practice, they can create digital experiences that empower users without controlling them. Furthermore, incorporating ethical guidelines and regulations is required in making the digital world credible and respect users' autonomy.

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