

# The Double-edged sword of Deepfakes: Navigating the Impact on Generation Z's Well-Being

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In this position paper, we explore the impacts of deepfake technology, a product of Generative Artificial Intelligence (Gen-AI), on Generation Z's well-being. With emphasis on mental health implications, potential for sexual exploitation, as well as spread of misinformation, this paper argues that while deepfakes have many innovative benefits in the world of content creation, there are some unethical usage that poses significant risks to society, which calls for action strategies to highlight and harness the benefits of Gen-AI while safeguarding its adverse effects.

Additional Key Words and Phrases: Deepfakes, Generative Artificial Intelligence (Gen-AI), User-Generated Content (UGC), Generation Z, Digital Ethics

## 1 INTRODUCTION

In an era of rapid technological advancement especially due to advancements of Artificial Intelligence, Generative Artificial Intelligence (Gen-AI) has risen as a pivotal factor in many innovations, specifically in content creation. Gen-AI is essentially a deep-learning model that utilizes algorithms that takes raw data of some form and attempts to generate an output based on probable statistics, which usually Gen-AI have been utilized in the past for studying statistics and specifically numerical data; however, in more recent years we have begun to see the rise of Gen-AI extended to fields beyond just numbers such as text, images, and speech [12]. Once Gen-AI started to emerge as a new concept, new technologies started to be created through its outputs such as deepfakes.

Deepfakes are essentially a union of a word between “deep learning” and “fake,” and is mainly used in creating content more specifically the generation of human-like images [13]. And although it has had many great applications and novelties such as help dub popular movies such as Parasite (2019) [3], as well as even offer supplemental education materials for kids in the classroom [11], deepfakes also have some drawbacks such as ethical concerns and malicious aspects to, which may leave an impact on consumers of user generated content(UGC) especially on social media, such as the people of Generation Z.

It has been reported that 70% Generation Z (Gen-Z), people born between the years 1997 – 1992, have utilized Generative AI (Gen-AI); Moreover, of this 70%, 52% of Gen-Zs use Gen-AI to make informed decisions. In addition, in comparing other generation of group's social media influence such as Millennials, people born between the years 1981-1996, it is reported that Gen-Zs are 10% more likely to buy a product from social media than millennials, which surveys further show that Gen-Zs spend more time than millennials on surveyed social medias with the exception of Facebook and Reddit [16]. This is especially concerning when there are predications that 90% of online content could potentially generated through Gen-AI by the end of 2026; however, concerns rise even further when analyzing the UGC created in today's time [5]. UGC gave rise to many social

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media platforms as it was built on the backbones of human authenticity and personalization, which allowed consumers to connect with many digital ecosystems, however, there are predications that by 2026, 90% of online content could be created by Gen-AI. Moreover talking about in today's state of the art in deepfakes, it is reported that deepfake pornography makes up 98% of all deepfake videos online furthermore that 99% of the individuals that are targeted in deepfake pornography are women [1].

Our position is that although deepfakes have the potential to reshape the development of user-generated content, the unethical use of this technology could damage an individual's mental health, make them vulnerable to sexual exploitation, and expose them to misinformation in the media if not mitigated properly. And because Generation Z has a prolific utilization of generative artificial intelligence and consumption of user-generated content, it is important to empathize and consider how it is currently and will continue to affect these individuals.

## **2 DEEPFAKES' TOLL ON GEN-ZS MENTAL HEALTH AND WELL-BEING**

Through continuous exposure to deepfake UGC, the mental health and well-being of Gen-Zs continues to be heightened more fearfully due to identity safety, social isolation, as well as lead to more negative portrayals of their self-image to, which is already a complicating process for Gen-Zs and through the rapid advancements of UGC of deepfakes and social media, it can have potentially long lasting hurtful effects on Gen-Zs mental health and well-being.

In a study done, where twenty individuals were picked from a diverse demographic of ages, occupations, and social media consumption, Lee et al. (2023), nine out of the twenty individuals were Gen-Zs which in addition to the rest of the individuals who were not Gen-Zs all raised concerns in the 'doppelganger-phobia,' identity exploitation, as well as identify separation. Five people raised concerns over doppelganger-phobia, four of which were Gen-Zs, where this phenomenon essentially is fearing where one's identify can be replicated and be exploited, for example, in transactional products for other's profit and pleasure, as well as demoralizing one's identity entirely, which participants noted as this could lead to potential abuse [10].

More on Psychological impacts, in general, artificial intelligence has been leading to social isolation as people might potentially be engaging more with AI generated systems rather than people in real life, consequently leading to a reduced sense of community [2]. In regards to deepfakes it is a state already seen in action in social media usage, Gen-Zs are at the forefront of experiencing and being more vulnerable to psychological impacts to their well-being and health beyond social isolation like depression and paranoia.

Deepfakes in social media have also intersected multiple industries such as fitness communities as well as beauty communities, by producing images of unrealistic body types as well as reveal biases towards certain groups more than others. In an article by Jessica Stewart, Stewart prompted three different Gen-AI software to create the "perfect" female body, all three resulted in similar results with women with tiny waists, chiseled abs, and large breasts, which further perpetuates beauty standards, which when companies use Gen-AI in their marketing, it is only pushing certain groups and pushing a standard [9]. This is an example of how deepfakes are having a negative impact on one's self image and could lead to longer lasting impact, potentially psychological impact, which is very concerning for the heavy utilizers of social media content, Gen-Zs.

## **3 SYNTHETIC EXPLOITATION: THE DARK SIDE OF DEEPFAKES**

Deepfake technology has initiated the rise of sexual exploitation of non-consenting individuals through user-generating content platforms, with its latest celebrity victim being Taylor Swift. In early January 2024, Taylor Swift fell victim to another deepfake pornographic attack, which essentially is where a celebrity or one is manipulated through Gen-AI and deepfake technology to

be in an intimate manipulated image [15]. Celebrities like Swift are only the high-profiled named individuals that might go more viral; however, anyone can fall victim to this including Gen-Zs.

In a Beverly Hills middle school, middle schoolers made national headlines for spreading sexually explicit deepfake images of their peers, who all are more than likely in the Gen-Z. Regardless of if the images were deepfakes, it still is a violation against one's privacy and safety. Although the sharing of sexually explicit photos is not a new phenomenon, simply adding Gen-AI and deepfakes is adds another dimension further, which can further degrade and negatively affect one's social acceptance further [7].

Studies have been done to track sexually explicit videos and photos, and of the videos it was determined that 90-95% of them were non-consensual videos, which of that 90-95% of non-consensual videos, 90% of them were of women [4]. In order to create a healthier digital ecosystem, deepfakes need to be mitigate and although laws are trying to passed to ban all forms of creating and sharing of sexually explicit images of anyone, as technology continues to advance so will it's extent, especially on social media and especially the potent effect towards Gen-Zs.

#### **4 DEEPFAKES' DILEMMA IN SPREADING MISINFORMATION.**

individuals, such as news anchors and politicians, that can spread false information without the individual being aware because of its realism to which due to the rapid spreading of information through social media, informational integrity is now questioned how does this affect users such as Gen-Zs as previously mentioned Gen-Zs are heavily influenced through social media.

In a 2019 survey, 63% of Americans found that deepfakes create confusion on current events, which keeps Americans on their toes in regard to knowing what information to trust [6]. Furthermore, examples such as deepfake videos with Generated news anchors spread like wildfire in 2022 all over social media, which pushed political agendas and shone a light on how easy it is to create and spread misinformation, as some of these videos only asks for a single prompt that can be made within minutes, but can cause so much distrust and create a harder space to navigate for those spending significant time in the digital ecosystem such as Gen-Zs, which as this technology continues to grow and become more sophisticated its will only become more difficult for Gen-Zs' overall well-being, avoidance of exploitation, and shield from lack of information integrity [14].

#### **5 NAVIGATING THE ETHICAL LANDSCAPE: DEEPFAKES IN BALANCE**

Deepfakes, while it is evidently harmful user generated content, especially in the social media ecosystem where Gen-Zs reside to their well-being, chances of being exploited, and information integrity, it is worth noting that there has been also great innovations that has come from the works of deepfakes. For example, celebrity soccer player, David Beckham, had a famous Malaria no more campaign that he utilized deepfake technology to generate his campaign in nine different languages, which went worldwide. Furthermore, actor, Val Kilmer, who had lost his voice due to a throat cancer, utilized deepfake technology to allow him to "speak." Finally, there also has been other potential benefits to deepfakes, surprisingly security benefits as HBO presented a documentary of LBGTQ+ activists hiding due to threats and they utilized deepfake to actually protect their identities but still communicate to the world [8]. Deepfake technology is a double side sword like most new technology; however, after seeing its expansion for a number years, now seems like a good time to call to question its mitigation of how we can make use of it in a positive way while also maintaining the integrity and safety of users that can be affected heavily by it like Gen-Zs. Questions amongst its regulation and circulation in media; Questions amongst its regulations towards deepfake based companies; as well as questions among finding new potential innovation to help the wellbeing of consumers like Gen-Zs are questions that we hope to find at this workshop.

## 6 INTERSECTION WITH WORKSHOP THEMES:

As most of us are researchers and have years of experience in content creation, as well as being Gen-Z consumers of variety of social media, we believe we can bring a very active voice that other HCI researchers can empathize with and start to build newer innovations from. Given the different perspectives that this workshop will go through, we think we can give a great perspective and open interesting question on specifically the consumer perspective of UGC. More specifically, we are interested social well-being and although we specifically talked more directly the consumer perspective, we are open to listening and wanting to try to understand social implications through all the different groups in this workshop affected by UGC in social media as we all are a part of the same digital ecosystem. Through this workshop, we are eager to learn more of the affects of Gen-AI UGC, not just the implications of solely deepfakes, but we wish to learn more and wanting to see how to navigate it is new forms of creativity, but all the while presenting dilemmas that we can conversate about to work through in order to become better researchers, as well as better members of society in contributing to a better healthier digital ecosystem.

## 7 CONCLUSION

Deepfakes, a form of generative artificial intelligence, has been utilized for diverse purposes that have proved to be both harmful and beneficial to the digital environment. As Generation Z increasingly consumes user-generated content, it is important to mitigate the harmful effects of deepfakes on their mental health, vulnerability to sexual exploitation, and exposure to false media information.

## 8 RESEARCH BACKGROUND AND INTERESTS

All of us are undergraduate university students with backgrounds in computer science and engineering apart of the University of Oklahoma UX Design club, who look to greater expand our knowledge in HCI domain specifically with interests in social well-being, user-centered focuses, and approaches in the HCI Domain. Some of us have years of experience in numerous amounts of research projects within artificial intelligence, mostly focused on work related to computer vision and machine learning. Examples include detection and tracking of objects such as birds, smart communication of AI agents in a field. We even have some members experienced in creating software involving generative-AI art, more so of interests than research.

Deepfake technologies has always interested us especially the social implications around people our age (Gen-Z), as we had seen first-hand experience in how Gen-AI had deeply affected our peers and ourselves before the trend of deepfakes as well as after its rise in the digital media. Our HCI interests lie in continuing to empathize with groups affected from this new digital technology to further help create user-centered designs and for special groups that are affected from technologies like deepfakes.

## 9 AUTHORS BACKGROUND

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