ETHICAL DEEPFAKES: LEVERAGING AI FOR POSITIVE USE-CASES IN DIGITAL STORYTELLING AND JOURNALISM

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Annotation. This article analyzes the positive and ethical approaches of deepfake technology, one of the modern technological achievements, in the fields of digital storytelling and journalism. Although deepfake is often recognized as a tool for spreading misinformation, there are scientific views on its potential applications in a positive and ethically justifiable manner. The article specifically explores positive aspects such as bringing historical figures to life, creating immersive stories, and protecting anonymous journalists. It also addresses ethical issues related to information reliability, the concept of consent, the right to privacy, and visual manipulation. Based on advanced examples developed using deepfake technology, platform experiences, and international legal regulations, useful recommendations for the future are presented. The article aims to demonstrate the alignment of ethical criteria and journalistic standards in directing the capabilities of artificial intelligence towards positive purposes.

Keywords: Deepfake, digital storytelling, journalism, artificial intelligence, ethics, ethical use, visual manipulation, immersive experience.

Deepfake technology, as one of the most complex and impactful tools created based on artificial intelligence (AI), is being used in many fields – both positively and negatively. It simulates a person's face, movements, and even voice through video and audio content created with generative adversarial networks (GAN). Although it was initially associated more with misinformation, political manipulation, or pornographic content, in recent years, deepfake has also gained opportunities for use in positive and ethical contexts.

This article examines the opportunities, advantages, and limitations of ethically using deepfake technology in the fields of digital storytelling and journalism. It also discusses the social, ethical, and legal issues of this technology.

Artificial intelligence (AI) has revolutionized various aspects of human life and introduced transformative changes in many fields. At the same time, it has also brought about new problems and threats, one of the most notable being deepfakes. 'Deepfakes' or 'synthetic media' refer to the use of manipulated digital content, such as hyper-realistic synthetic videos, audios, images, or texts created using advanced AI techniques to disrupt decision-making processes. The main epistemic threat is that deepfakes can easily lead people to false beliefs. This technology can produce information to such a degree that it is almost indistinguishable from real material. It affects public opinion, social groups, political discourse, and operations aimed at personal and national security.

The complexity and spread of deepfakes has primarily increased due to advancements in artificial intelligence and machine learning. These advanced tools can create hyper-realistically manipulated videos or audio recordings, which are almost indistinguishable from the original content. The growing prevalence of deepfakes may be associated with factors such as increased media coverage, rising public awareness, and potential misuse in areas like entertainment, politics, and even personal blackmail. Therefore, there is an urgent need for technologies and strategies to detect and mitigate deepfakes to ensure the integrity of digital content. A cursory analysis of search terms related to deepfakes highlights concerning attention towards tools that facilitate their production. Google Trends shows a consistent global increase in searches for the term 'deepfake' starting from 2023.

Google Trends data on 'deepfake' since 2020. Interest in deepfakes has been increasing year by year.

Perspective gaps within TPP (self-awareness and differences in others' perception) are more evident among those with high cognitive abilities. Such individuals tend to trust more, even though deepfakes can significantly mislead others,

they have a higher capability to detect these manipulations. The results indicate that individuals with high cognitive abilities, especially those who frequently encounter deepfakes, are well-equipped to differentiate them and apply this perception in their real-world assessments.

1. Chesney and Citron (2019) found that deepfakes exacerbate the problem of misinformation in public discourse. They enhance the phenomenon of "fake news" by producing highly realistic yet deceptive audio and video content. Such content can undermine the credibility of debate participants and distort the factual underpinnings of political discussions. Deepfakes can also erode trust in both public and private institutions. Elected officials, judges, agencies, and others can be targeted, making it increasingly difficult to refute false and harmful content. This could intensify polarization in society and diminish trust in key institutions.

2. Kondamudi and others. (2023) discuss various aspects of fake news on social networks. The impact of deepfakes on public opinion, political discourse, and personal safety has not been directly addressed on social networks. The research should examine current strategies to combat deepfakes or how to address these gaps.

3. Lollia (2023) highlights the impact of deepfakes on social opinion, political discourse, and personal safety on social media platforms. Deepfakes pose a significant threat to social security. As seen in the 2016 US elections, they can be weaponized for spreading misinformation and manipulating public sentiment. Additionally, deepfakes can be created to fabricate scandals, damaging individuals' reputations and invading their personal lives. The rapid spread of these videos on social platforms brings attention to their potential consequences.[1]

Principles of Deepfake Technology

Deepfake technology is based on GAN (Generative Adversarial Networks) algorithms.

These algorithms consist of two main parts: the generator and the discriminator.

[1] Chesney, R., & Citron, D. Deep Fakes: A Looming Challenge for Privacy, Democracy, and National Security. California Law Review.2023

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The generator creates new images, while the discriminator tries to determine whether they are real or fake. These two systems improve their ability to create realistic images through competition.

The mechanism of deepfake operation mainly involves the following:

• Face detection and synchronization – the video is analyzed and movements are adjusted.

• Synthesis – another face is synthesized onto the target person's face.

• Final editing – sound, background, and movements are harmonized.

One of the most important factors in ethical use is consent. It is morally unacceptable to adapt someone's face or voice to another context without their permission.

Deepfake technology can manipulate forms of intangible assets such as visual identity, personal likeness, and voice. This poses a threat to information security, personal freedom, and social trust.

The positive use of 'deepfakes' is based on transparency. This implies that users must clearly know that the video has been generated.

In digital storytelling, creating interactive videos in which historical figures, such as Abraham Lincoln, Leonardo da Vinci, or Babur, speak through deepfake technology allows for teaching history to younger generations in a deeper and more interesting way.

Using MyHeritage's 'Deep Nostalgia' service, people establish emotional connections by animating photos of their deceased loved ones.

Deepfake can also be used to visualize events related to individuals undergoing therapy for depression and mental issues. By reenacting events that occurred in Afghanistan, journalists conveyed the story in an immersive and understandable manner.

Ensuring anonymity, journalists operating in authoritarian regimes use deepfake to conceal their faces.

News in China is presented 24/7 in multiple languages through AI news readers developed by the Xinhua agency.

When misused, deepfake technology can lead to misinformation, political manipulation, and personal rights violations in society.

The phenomenon known as 'Liar's Dividend' arises as digital deceit increases, causing even real videos to be denied.

Deepfakes directly affect the consciousness of the younger generation, highlighting the need to develop media literacy in education.

The European Union, UNESCO, and the UN have developed legislation and recommendations for ethical deepfakes.

Google and Microsoft are creating 'deepfake detector' projects to analyze visual content.

It is essential to educate students about the positive and negative aspects of AI and deepfakes.

This will enhance their ability to make conscious decisions.[2]

Deepfake technology is recognized as one of the most serious challenges of the modern information space. Its main danger lies in its ability to create content that appears trustworthy but is actually false. This poses a threat to social, political, and economic stability on one hand, and increases the need for information verification on the other hand. Analyses show that deepfake technology is spreading most through social networks. Algorithmic recommendations and systems that display videos based on user activity accelerate this process.

For example, on platforms like TikTok and Instagram, deepfake content garners more attention and comments, leading to its popularization. Additionally, the low level of technological literacy in society and insufficient media literacy further intensify the threats posed by deepfakes. Research shows that most users do not use fact-checking tools. Therefore, educating information consumers and developing media literacy is

[2] Westerlund, M. (2019). The Emergence of Deepfake Technology: A Review. Technology Innovation Management Review.

also crucial in the fight against deepfakes. Another important aspect is that the deepfake technology itself is a neutral tool and its use for good or bad purposes depends on humans. For example, it can be positively used in the film industry to restore the young appearance of famous actors or to bring historical figures to life. Hence, there is a need for regulation of this technology and the development of ethical standards.

In conclusion, although the Deepfake technology was initially viewed as a threat, it can also play an important role in many fields that provide positive, ethical, and social benefits. The ethical use of this technology in historical storytelling, journalism, psychotherapy, education, and culture should be based on ethical principles and permissions. Additionally, it is crucial to have regulatory frameworks from legal and technical perspectives, and to rely on the conscious choices of users.

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