Deepfake ads and Virtual Personas: The Intersection of Personalization and Manipulation in Modern Advertising

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Abstract:

In recent years, deepfake technology and virtual personas have rapidly evolved, becoming influential tools in modern advertising. This paper explores the intersection of these technologies, examining their impact on the advertising industry, consumer behavior, and ethical considerations. Deepfake technology, which uses artificial intelligence (AI) to create highly realistic but synthetic audio, video, or images, has revolutionized content creation by enabling the production of personalized and dynamic advertisements at scale. The integration of deepfakes and virtual personas in advertising presents numerous opportunities, such as enhancing brand storytelling, targeting specific demographics with tailored content, and reducing production costs. However, this intersection also raises significant ethical and regulatory concerns. This paper aims to investigate how the intersection of deepfake technology and virtual personas within the realm of modern advertising affects user engagement. The primary problem this research seeks to address is the lack of comprehensive knowledge about how deepfake technology and virtual personas influence user engagement in advertising. The research followed the experimental methodology through preparing a survey questionnaire on a 5-point Likert scale to measure to investigate how the intersection of deepfake technology and virtual personas within the realm of modern advertising affects user engagement. The research concluded several findings, the most significant of which is that there are statistically significant differences in the levels of engagement and connection of the sample group towards deepfake advertisements compared to traditional advertisements. The emergence of deepfake technology in advertising has positioned it as a pioneering tool in the industry, enabling deeper and more personalized engagement with audiences. By harnessing artificial intelligence to create hyper-realistic virtual personas and manipulate digital content, advertisers can craft unique and compelling campaigns that stand out in a saturated digital landscape. Deepfake technology facilitates the ability to identify individual preferences and design advertisements tailored accordingly, making them more relevant and appealing to each user. For instance, a deepfake-generated persona can address viewers by name or interact with them in highly personalized ways, enhancing user engagement and emotional connection. Moreover, it offers high realism and creative flexibility at an efficient cost. Advertisers can produce realistic videos without the need for extensive resources, such as hiring actors, organizing shoots, or scouting locations. This democratizes access to high-quality content, allowing smaller businesses to compete effectively without significant budgets. Deepfake technology also supports cross-cultural adaptability. It enables seamless localization of a single advertisement for diverse languages, accents, and cultural contexts, ensuring better resonance with global audiences. A virtual spokesperson, for example, can deliver the same message tailored to the preferences of various regions, fostering inclusivity and relevance. Additionally, deepfakes open the door to innovative storytelling. Virtual personas can represent brand values or fictional characters, offering immersive narratives that captivate audiences. These personas can even interact with users in real-time, providing an unprecedented level of interactivity and engagement in advertising experiences. However, the ethical implications of deepfake advertising must not be overlooked. Concerns about transparency and potential audience skepticism can pose challenges to the adoption of this technology. Responsible use of deepfake advertising, therefore, becomes critical to maintaining consumer trust. This study delves into the significant intersection of personalization and manipulation in modern advertising, shedding light on the dual nature of deepfake technology. It presents insights into how this transformative tool can redefine the way brands connect with users in the digital age while emphasizing the importance of ethical considerations to unlock its full potential.

Research Problem: The primary problem this research seeks to address is the lack of comprehensive knowledge about how deepfake technology and virtual personas influence user engagement in advertising.

Research Objective: This paper aims to investigate how the intersection of deepfake technology and virtual personas within the realm of modern advertising affects user engagement.

Research Hypotheses: H1: Advertisements utilizing deepfake technology will generate higher user engagement compared to traditional advertisements. H2: Virtual personas created using deepfake technology will be perceived as more relatable and engaging by users than real human personas in advertisements. H٣: Advertisements featuring deepfake-generated virtual personas will evoke stronger emotional responses from users compared to those using traditional advertising methods. H٤: Ethical concerns and awareness of deepfake technology will moderate the relationship between the use of deepfakes in advertising and user engagement, with higher awareness leading to lower engagement. H5: The intersection of personalization and manipulation in deepfake advertising achieves a greater impact on user engagement and connection.

Research Methodology: The study adopted an experimental methodology, employing a survey questionnaire structured into two main sections. Section 1 focused on demographic characteristics and consisted of five questions designed to collect respondents' sociodemographic information. Section 2 comprised a set of 40 statements measured on a 5-point Likert scale, adapted from Chesney and Citron (2019), Kaplan and Haenlein (2020), Wardle and Derakhshan (2017), and Cook et al. (2017). This section aimed to examine the interplay between deepfake technology and virtual personas within the context of modern advertising and its influence on user engagement.

Result:

There were statistically significant differences between the mean scores of Group One and Group Two on the statements of the first section (Brand Recall) after exposure to 360-degree video advertisements. These differences were in favor of Group One, with t-values for the statements ranging from (4.57 – 28.27), all of which were statistically significant. Based on Table (4), its results, and Figure (9), the first research hypothesis is confirmed. The t-test revealed significant differences in the mean scores of the sample members' responses to the items in the second section of the questionnaire related to awareness of deepfake technology in advertisements and reactions to it between the pre-test and post-test applications. These differences favored the post-test application, with t-values ranging from (13.10 – 43.56), all significant at the 0.001 level. the Eta-squared (η^2) values used to measure the effect size of deepfake advertisements on user engagement and connection with this type of advertisement compared to traditional advertisements. The Eta-squared values for the sections of the questionnaire ranged between (0.963 – 0.972), with the overall effect size reaching (0.986). These values are greater than the threshold of 0.14 set by Cohen for a large effect size. This indicates that the impact of deepfake advertisements presented to the respondents was large, leading to significant engagement and connection from the respondents compared to traditional advertisements.

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