

Empirical Study on the Appropriation of Art (Copyright) through AI Deepfakes with Special Reference to Public Perception in Chennai

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Abstract: *Deepfakes, powered by artificial intelligence (AI), have emerged as a potent tool for manipulating audiovisual content, presenting both opportunities and challenges for various sectors. This study examines the multifaceted impacts of deepfakes, ranging from political discourse to personal privacy, within the context of Chennai's dynamic social landscape.*

Firstly, the paper explores the political ramifications of deepfakes in Chennai. With a diverse political climate, Chennai serves as a microcosm for understanding how deepfakes can distort public perception, influence elections, and undermine democratic processes. Additionally, the proliferation of deepfake political propaganda poses a significant threat to the credibility of information dissemination in the digital age.

Secondly, the societal implications of deepfakes on cultural norms and identity are examined. Chennai, renowned for its rich cultural heritage, faces the challenge of preserving authenticity in the face of deepfake manipulation. From fabricated celebrity endorsements to falsified historical events, the erosion of trust in media authenticity threatens the cultural integrity of Chennai society.

Furthermore, the paper investigates the economic impacts of deepfakes on industries vital to Chennai's economy. The emergence of deepfake-driven fraud schemes poses a threat to consumer trust and financial stability, necessitating proactive measures to mitigate economic repercussions.

Keywords: Deepfakes, Revenge, Security Softwares, Personal data, Privacy right

I. INTRODUCTION

In recent years, advancements in artificial intelligence (AI) have facilitated the creation of deepfake technology, which has emerged as a formidable tool capable of generating hyper-realistic digital content, including videos, images, and audio recordings, often indistinguishable from authentic media. While deepfake technology holds promise for various applications, such as entertainment and filmmaking, its proliferation has raised significant concerns regarding its potential impacts on society, particularly in densely populated urban centers like Chennai. As the capital city of Tamil Nadu and one of India's largest metropolitan areas, Chennai stands at the forefront of technological innovation and digital transformation.

The impacts of deepfakes on society in Chennai city encompass a wide range of issues spanning from the dissemination of misinformation and the erosion of trust in media to threats against individual privacy and security. Deepfake technology has the potential to exacerbate existing societal tensions and undermine democratic processes by manipulating public discourse and shaping perceptions through the dissemination of fabricated content. Moreover, in a diverse and culturally rich city like Chennai, where traditional media outlets coexist with digital platforms, the proliferation of deepfakes raises complex ethical, legal, and regulatory questions regarding content authenticity, media integrity, and digital literacy.

By exploring the attitudes, beliefs, and behaviors of Chennai's residents towards deepfakes, policymakers, researchers, and civil society actors can develop targeted interventions and strategies to mitigate the negative impacts and harness



the potential benefits of AI-driven technologies responsibly. As Chennai continues to evolve as a dynamic urban hub, grappling with the challenges posed by deepfakes demands collaborative efforts and innovative solutions that prioritize the protection of public trust, individual rights, and societal well-being in the digital age.

OBJECTIVES:

- To know whether Deepfake Infringe on individual privacy rights and lead to unauthorised use of personal Data.
- To find The best way to protect yourself from negative impacts of Deepfakes

II. REVIEW OF LITERATURE

Pashentsev, E., & Bazarkina, D. (2023) This chapter analyzes threats to psychological security caused by the malicious use of artificial intelligence (MUAI), including disinformation through deepfakes, interference in electoral processes with bots, and so on, in four BRICS countries as well as the measures governments have taken to combat MUAI. Social challenges, such as low technical literacy among a significant part of the population, the growth of cybercrime, unemployment, etc., are factors in the growth of MUAI in the field of psychological security within BRICS countries.

Krishna, V. V. (2024). This paper studies The way in which powerful AI technologies could transform our lives, society, economics, governance and most importantly ethics and morality surrounding it is quite popular in every day news media as well as our drawing room discussions at home. There is considerable confusion among individuals and communities on the impact of AI. Profit seeking global mega corporations have already poured in billions of dollars in AI research and development to maximise their profits.

Rajagopal, T., Chandrashekar, V., & Ilango, V. (2023). Machine learning and artificial intelligence in Journalism are aid and not a replacement or challenge to a journalist's ability. Artificial intelligence-backed fake news characterized by misinformation and disinformation is the new emerging threat in our broken information ecosystem. Deepfakes erode trust in visual evidence, making it increasingly challenging to discern real from fake. Deepfakes are an increasing cause for concern since they can be used to propagate false information, fabricate news, or deceive people.

Pasupuleti, V. R., Tathireddy, P. R., Dontagani, G., & Rahim, S. A. (2023) Deepfake detection has grown to be an increasingly important research area due to the potential harm that deepfakes can cause to individuals and society. In recent years, deep learning techniques have shown promising results for detecting deepfake images and videos. In this research, we provide a deep learning-based strategy using Custom DenseNet for deepfake image detection. This model used a big dataset of actual and deepfake photos to train a convolutional neural network (CNN) using the Custom DenseNet architecture.

Radhakrishnan, S., & Rajendran, L. (2023) In the digital age, information is drastically exchanged among users. This data exchange paved the way for unsolicited access by cybercriminals, which could lead to psychological and financial loss. In this study, through a pre- and posttest experimental design, 668 Indian teenagers aged between fifteen and nineteen were evaluated last year. The preliminary study revealed low performance by teenagers in e-mail practices, password management, software practices, social media usage, and privacy settings.

McDonnell, K. J. (2023) Over the last 75 years, artificial intelligence has evolved from a theoretical concept and novel paradigm describing the role that computers might play in our society to a tool with which we daily engage. In this review, we describe AI in terms of its constituent elements, the synthesis of which we refer to as the AI Silecosystem. Herein, we provide an historical perspective of the evolution of the AI Silecosystem, conceptualized and summarized as a Kuhnian paradigm. This manuscript focuses on the role that the AI Silecosystem plays in oncology and its emerging importance in the care of the community oncology patient.

Rashid, A. B., & Bappy, M. H. (2023) Artificial intelligence (AI) has become a reality in today's world with the rise of the 4th industrial revolution, especially in the armed forces. Military AI systems can process more data more effectively than traditional systems. Due to its intrinsic computing and decision-making capabilities, AI also increases combat systems' self-control, self-regulation, and self-actuation. Artificial intelligence is used in almost every military



application, and increased research and development support from military research agencies to develop new and advanced AI technologies is expected to drive the widespread demand for AI-driven systems in the military.

Bharathiraja & Anusooya, G. (2023) In today's digital landscape, digital images are widely used for communication across various platforms, but they are also vulnerable to tampering and deception. The proliferation of image editing tools and software has made it easier for individuals to manipulate images, but extensive tampering can compromise the accuracy of conveyed information. The human eye is difficult to distinguish between original and tampered images, leading to potential misinformation

Uppada, S. K., & Sivaselvan, B. (2022). With an increase in the number of active users on OSNs (Online Social Networks), the propagation of fake news became obvious. OSNs provide a platform for users to interact with others by expressing their opinions, resharing content into different networks, etc. In addition to these, interactions with posts are also collected, termed as social engagement patterns. By taking these social engagement patterns (by analyzing infectious disease spread analogy), SENAD (Social Engagement-based News Authenticity Detection) model is proposed, which detects the authenticity of news articles shared on Twitter based on the authenticity and bias of the users who are engaging with these articles.

Hakak, Khan W. Z. (2021) There are numerous channels available such as social media, blogs, websites, etc., through which people can easily access the news. It is due to the availability of these platforms that the dissemination of fake news has become easier. Anyone using these platforms can create and share fake news content based on personal or professional motives. To address the issue of detecting fake news, numerous studies based on supervised and unsupervised learning methods have been proposed. However, all those studies do suffer from a certain limitation of poor accuracy.

Yazdinejad, A., & Duncan, E. (2021) In recent years, Smart Farming (SF) and Precision Agriculture (PA) have attracted attention from both the agriculture industry as well as the research community. Altogether, SF and PA aim to help farmers use inputs (such as fertilizers and pesticides) more efficiently through using Internet of Things (IoT) devices, but in doing so, they create new security threats that can defeat this purpose in the absence of adequate awareness and proper countermeasures. In this paper, we first itemize the security aspects of SF and PA. Next, we review the types of cyber attacks that can violate each of these aspects. Accordingly, we present a taxonomy on cyber-threats to SF and PA on the basis of their relations to different stages of Cyber-Kill Chain (CKC).

Vigneshwaran, T., & Velammal, B. L. (2024) With the help of advancements in connected technologies, social media and networking have made a wide open platform to share information via audio, video, text, etc. Due to the invention of smartphones, video contents are being manipulated day-by-day. Videos contain sensitive or personal information which are forged for one's own self pleasures or threatening for money. Video falsification identification plays a most prominent role in case of digital forensics.

Phung, K. A., & Nguyen, T. V. (2022) Pervasive computing, or ubiquitous computing, is a computing paradigm that leverages the user interaction with microprocessors or gadgets in an "anywhere and anytime" manner. The users do not need to access a PC or laptop; instead, they can use their body-worn devices. The development of cloud technology empowers pervasive computing even more by providing communication across different objects for data sharing. Thanks to that, IoT offers a stage to associate heterogeneous devices from smart homes, and smart urban communities, to smart healthcare. These interconnected objects and sensors harvest the information for complicated tasks such as recognition, prediction, planning, and recommendation

Acharjya, P. P., Koley, S., & Barman, S. (2022) Deep learning (DL) is a rising field that is applied in forensic science and criminal investigation (FSCI). FSCI specialists are confronting many difficulties because of the volume of information, little bits of confirmations in the turbulent and complex climate, conventional lab structures, and once in a while, deficient information which might prompt disappointment. DL is at present supporting practically every one of the unique fields of FSCI with its various methodologies like analysis of data, pattern recognition, image handling, computer vision, data mining, statistical examination, and probabilistic strategies.

Sambasivan, N., & Consolvo, S. (2019) South Asia faces one of the largest gender gaps online globally, and online safety is one of the main barriers to gender-equitable Internet access [GSMA, 2015]. To better understand the gendered risks and coping practices online in South Asia, we present a qualitative study of the online abuse experiences and



coping practices of 199 people who identified as women and 6 NGO staff from India, Pakistan, and Bangladesh, using a feminist analysis. Participants coped through informal channels rather than through technological protections or law enforcement. Altogether, our findings point to opportunities for designs, policies, and algorithms to improve women's safety online in South Asia.

Daniel, C. P. (2023) Gender-based violence (GBV) is a multifaceted problem. The most rapidly increasing modern form of violence is the intertwined epidemic of 'Technology Facilitated GBV' [TF GBV] and sexual violence against women and girls. Phase-I results exposed the top-four socio-economic determinants of GBV: Gender Development Index, Gross National Income, Human Development Index and Gender Inequality Index. Phase-II results indicated that the unethical use of technology was highest among the urban male internet users. The ICT-progress increased the incidence of TF GBV due to unethical use of technology which impacted women, global health and productivity.

Deb, S., Majumdar, B., & Sunny, A. M. (2021) This book provides a comprehensive understanding of youth development and protection in the Indian context. It reviews the demographic and socio-economic background and future prospects of Indian youth. The book discusses the role of family and culture in the upbringing and development of youth, changing political and socio-economic situations, and the influence of parents and teachers in shaping the future of the youth. The book highlights the nature of adversities faced by children and youth and the subsequent impact on their mental health and well-being.

Javed, A. R., & Gadekallu, T. R. (2022) With the alarmingly increasing rate of cybercrimes worldwide, there is a dire need to combat cybercrimes timely and effectively. Cyberattacks on computing machines leave certain artifacts on target device storage that can reveal the identity and behavior of cyber-criminals if processed and analyzed intelligently. Forensic agencies and law enforcement departments use several digital forensic toolkits, both commercial and open-source, to examine digital evidence.

Harini, R., & Sivaselvan, B. (2022) Deepfake detection has grown to be an increasingly important research area due to the potential harm that deepfakes can cause to individuals and society. Deep learning (DL) is a rising field that is applied in forensic science and criminal investigation (FSCI). FSCI specialists are confronting many difficulties. The development of cloud technology empowers pervasive computing even more by providing communication across different objects for data sharing. Due to its intrinsic computing and decision-making capabilities, AI also increases combat systems' self-control, self-regulation, and self-actuation.

C., Dereci, L., & Nguyen, T. V. (2022) This paper studies The way in which powerful AI technologies could transform our lives, society, economics, governance and most importantly ethics and morality surrounding it is quite popular in every day news media as well as our drawing room discussions at home. In this paper, we first itemize the security aspects of SF and PA. Next, we review the types of cyber attacks that can violate each of these aspects. Accordingly, we present a taxonomy on cyber-threats to SF and PA on the basis of their relations to different stages of Cyber-Kill Chain (CKC). In addition to these, interactions with posts are also collected, termed as social engagement patterns. By taking these social engagement patterns (by analyzing infectious disease spread analogy).

III. METHODOLOGY

The author has adopted empirical method with a convenient sample method to do this non-doctrinal study. Primary sources such as questionnaires and surveys are used for this research. Secondary sources such as books, articles and journals were referred for the study. The Independent variable taken here is Age, Gender, Educational Qualification, Occupation. The dependent variables are Deepfake make easier to spread misinformation online. The sample size is 206 and the sampling method is convenient sampling

IV. CONCLUSION

In conclusion, addressing the multifaceted impacts of deepfakes in Chennai city requires a holistic approach encompassing education, regulation, and technological innovation. By fostering a culture of digital literacy and implementing effective safeguards, Chennai can navigate the challenges posed by deepfake technology while preserving societal trust and integrity. Moreover, the acknowledgment of deepfake threats to the credibility of news sources and journalists among urban residents emphasizes the imperative for collaborative efforts between the



government, media organizations, and tech companies to combat the spread of misinformation and uphold journalistic integrity. In Chennai city, the pervasive influence of deepfake technology poses significant challenges and implications for society across various demographic segments. As evidenced by the data presented, there is a clear correlation between demographic factors such as age, gender, occupation, place of residence, and educational qualification with perceptions and awareness regarding deepfake technology.

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