

Title: The Use of Artificial Intelligence Applications in Producing Satirical Digital Content

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Abstract

This study explores the extent to which artificial intelligence (AI) technologies are used in producing satirical digital content. It begins by examining the concept of AI and its applications in media work, along with identifying key features of AI relevant to content creation. The importance of this topic lies in the growing impact of AI tools, which have enabled individuals with minimal technical skills to create and manipulate satirical digital content. This technological development has transformed media production, particularly in the satire genre. However, the study reveals that while satirical content may serve constructive purposes—such as highlighting social flaws or prompting reform—the involvement of AI in its production has raised several concerns. Notably, AI-generated satire can infringe on individuals' personal lives, often leading to cyber bullying. This has contributed to the rise of social tensions and conflicts within communities, underscoring the need for ethical guidelines and responsible use of AI in digital media.

Keywords: AI applications - satirical content - satirical digital content.

Introduction

The world has witnessed significant technological advancements with the emergence of the internet and its entry into various fields, particularly media. This has led to the rise of new media platforms that surpass traditional media in terms of features and advantages, the most prominent of which are news websites. Internet users have increasingly turned to these sites, preferring them to traditional media for accessing the information they seek. News websites are "those sites available on the internet that present themselves as independent and comprehensive media projects, equipped with a team of editors, reporters, an editorial board, and a clear editorial policy." As for artificial intelligence, it is "the ability of machines and digital computers to perform tasks that mimic those carried out by humans, such as the ability to think and learn through programs and technologies that enable these machines and computers to exhibit intelligence" (Palestine Electronic Network).

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In recent years, many news websites have turned to using modern and advanced technologies, such as the most advanced artificial intelligence applications, which are more capable of producing, analyzing, and disseminating media content to a larger audience and on a broader scale for internet users. This leads to their increased spread, not only locally or in the Arab world but globally, to follow current events in real-time and stay updated on everything new around the world at the very moment it happens.

The growing presence of artificial intelligence applications is leading to the development of news websites today by applying algorithms to convert large data files into news texts, relying on the production of reports through the use of technologies such as robots and augmented reality in the media process. Artificial intelligence applications, such as augmented reality, virtual reality, robot journalists, blockchain, and others, have become some of the main factors in the development of various media platforms, especially news websites.

The matter did not stop there; many institutions and news websites worldwide have used these applications. For example, the British newspaper *The Guardian* was the first to use the "robot journalist" technology to convert data into ready-to-publish news reports. Additionally, *Associated Press (AP)*, *Forbes*, *Los Angeles Times*, and *ProPublica* have utilized computer algorithms related to artificial intelligence applications, which are distinguished by their ability to produce media content more quickly, in multiple languages, in larger quantities, and with fewer errors. This leads to improved news quality, reaching the highest level of credibility and addressing the issue of fake news. Meanwhile, the Chinese news agency *Xinhua* succeeded in creating new ways to present news stories by relying on virtual reality (VR) technology to display news in a format resembling 3D films, allowing viewers to experience the news as if it were real, making them feel like participants in the event itself. (Khaled, 2018).

What has been mentioned about the capabilities and potential of artificial intelligence applications and their role in the development process is not limited to news websites. These technologies have also contributed to the development of the media

content itself. They have provided internet users with the opportunity to participate in the editorial process by editing, deleting, and adding to the media text through comments ("Feedback"), leading to the emergence of what is called "Citizen Journalism." All of this is just a glimpse of the vast and inexhaustible realm of artificial intelligence, which continuously offers its capabilities, not only in the media field but across all aspects of life.

To this extent, AI applications have penetrated the media world in all its forms and patterns, with their modern capabilities, advanced mechanisms, and human resources capable of dealing with this evolution.

The role of artificial intelligence applications did not stop there; these applications have played a prominent and essential role in producing satirical digital content across various social media platforms. Here, we can pose several questions: What is meant by artificial intelligence? What is meant by satirical digital content? How have AI technologies and tools contributed to the production of satirical digital content?

1- The Concept of Artificial Intelligence

The second half of the 19th century witnessed the beginning of the emergence of the seeds of artificial intelligence, although computers did not yet exist. However, artificial intelligence – as a mathematical logic – found its place and paved the way in the scientific community.

Despite the differences among specialists, whether academics, philosophers, or scientists, in defining and determining the concept of artificial intelligence, there has been consensus since the term's emergence in the early 1950s that it is the scientific and technological stream that encompasses the methods and techniques aimed at creating a machine capable of simulating natural or human intelligence.

Experts in robotics and informatics consider this definition sufficient and adequate to describe and explain the term "artificial intelligence." On the other hand, there is a group of specialists in this field who believe that this definition is unclear and vague as a complete definition, given its nature, which is tied to the evolving nature of technology that changes over time.

However, what everyone agrees on is that its primary role is to search for ways to solve issues that involve logical, computational, or high-level algorithmic complexity. (Ahmed Ali Al-Zahrani, 2022)

It is also defined as:

Artificial intelligence is a field focused on developing machines and computer systems capable of performing tasks that emerged between 1940 and 1960, which typically require human intelligence. This includes the creation of intelligent systems capable of learning, thinking, and making decisions on their own. (Abdelbaki, 2023, pages 139-160)

1-1 Features of Artificial Intelligence :Artificial intelligence is characterized by many features that set it apart from traditional software, including intelligence, self-learning, decision-making, perception, creativity and innovation, problem-solving, which we will discuss in detail below:

- AI systems have the ability to learn and adapt to new situations, allowing them to perform tasks that were previously possible only for humans.
- AI systems can learn from data and experiences and continuously acquire new knowledge, leading to improved performance over time without the need for human intervention.
- AI systems have the ability to make decisions based on data, rules, and probabilistic reasoning.
- AI systems can sense and interpret their environment using various sensors and input devices.
- AI systems contribute to enhancing innovation and creativity in various fields, enabling the generation of new ideas and solutions that lead to innovations across different areas, as well as improving existing processes.
- AI systems are capable of analyzing complex problems and offering solutions more quickly and accurately than humans in most cases.
- Ability to process big data: AI systems can process massive amounts of data quickly and simultaneously, allowing for faster and more efficient computations. (Hashimi Rashida & MilyaniAbdelwahab, 2024, pages 50-51)

1-2 Goals of Artificial Intelligence:Artificial intelligence aims to understand the nature of human intelligence through computer programs and systems capable of simulating human abilities in solving problems or making certain decisions. Essentially, it is based on the principles of induction and reasoning. Additionally, it seeks to develop systems that perform tasks simulating human intelligence or surpassing it. Therefore, AI applications are designed to mimic human cognitive behaviors. (Safaa Jamal Jawas& Ahmed Jamal Jawas, 2024, pages 1371-1401)

1-3- The Use of Artificial Intelligence Technologies in the Media Field: Artificial intelligence technologies have led to significant changes in many sectors, which have directly impacted work in the media field, whether in photography, editing, proofreading, translation, or dealing with big data. (Amr Abdel Hamid, 2020). Thus, recent technological developments in the field of media and communications, particularly artificial intelligence applications, have brought about significant changes, especially after the large integration between the information and communications sectors and the connection to the internet. This has led to the creation of new communicative spaces that attract the attention of more than four billion internet users worldwide, representing 53% of the global population connected to the web. Of these, more than three billion users are on social media platforms, making up 42% of the population, and over 68% access these sites through their smartphones, meaning more than five billion smartphone users globally. This indicates that the artificial intelligence revolution has a deeper impact on the media and publishing industry than any previous revolutions, which will intensify competition for media leadership in the Middle East and around the world. From here, we find that artificial intelligence is shaping the media landscape based on completely different roles that did not exist before, where machines now play a role alongside humans. And there remains a question that imposes itself on the media scene: artificial intelligence and its relationship with the media... where is it headed?

1-4 Uses of Artificial Intelligence in Producing Satirical Digital Content

Concept of Satirical Digital Content: Electronic communities of satire have rapidly and noticeably emerged on the internet, particularly on social media platforms, especially Facebook, in recent years. The number of followers of these communities has significantly increased in many countries across the Middle East. These are pages that rely on satire to criticize political, social, and economic conditions, not only targeting governing systems but also political elites and powers. The content published on these pages takes various forms, most notably: caricatures, manipulated images with captions, political jokes, and videos and audio clips commenting on statements by some officials and public figures. (Khalifa Badra, 2024, p. 93)

Basic Features of Satirical Digital Content: Satirical content is an effective artistic medium with the ability to highlight shortcomings in political or social issues through humor, making it widely disseminated and reaching many audiences. While some describe satirical content as a behavior that involves light-hearted and smooth criticism, aimed at focusing on a specific behavior, whether personal, institutional, social, or political, with the purpose of changing and improving it, there is agreement on the following characteristics of satirical content on social media:

- **Critique:** Satirical content is a form of criticism aimed at actions that are seen as flawed or deficient, by highlighting and presenting them to a wide audience, encouraging the adoption of behaviors that oppose these flaws.
- **Irony:** Satirical content uses irony to clarify the issue being criticized. In most cases, satirical content carries multiple implicit meanings, rather than being openly expressed. The use of such content increases during times of dissatisfaction or discontent with prevailing political and social conditions. Satirical content often addresses and sheds light on political issues, not through political analysts or experts, but by mocking the positions and contradictory statements of political figures. For example, it uses simple, humorous language close to everyday street talk, making it more engaging and impactful due to its straightforward and humorous nature. (Ahmed, 2018)

2- Artificial Intelligence and Satirical Digital Content: What's the Connection?

Satire has become a significant part of people's lives, evolving into a phenomenon that particularly attracts the youth, especially Algerian youth in recent years. It has become a space for venting social crises and an attempt to escape from the difficult social circumstances faced by the youth, as well as a way to express dissatisfaction with political situations.

With the emergence of social networks and the development of modern technologies, especially artificial intelligence applications, Algerian audiences have been driven to create satirical content that criticizes political, social, and economic conditions. This is largely due to the continuous evolution of AI applications, particularly by those who specialize in these technologies, which has led to the widespread dissemination of satirical content across social media platforms, attracting high viewership and significant attention from its various humorous pages.

Undoubtedly, satirical content now presents stereotypical images that depict political, economic, and social scenes in ways that resist analysis or interpretation. It has also transformed into a lifestyle pattern that influences individuals' behavior by unifying their thoughts and beliefs. In recent years, a number of satirical posts have emerged on Facebook pages across Algeria, relying on criticism and humor to address current issues. The role of artificial intelligence applications has not been limited to the emergence of satirical content alone. Due to the advanced technologies it possesses, AI has played an important role in creating images that express opinions in a way that invites satire. In recent years, we have observed many fabricated images thanks to AI applications, leading to various crises, both at the personal and official levels. Additionally, there are videos containing content intended to provoke laughter and ridicule. These videos are often not real but fabricated, primarily aimed at satire. Many of the situations faced by Algerian society, in particular, have led to numerous social problems, prompting the society to turn to this virtual space to freely express opinions without censorship or accountability. As

a result, the Algerian individual no longer fears criticism for posting satirical videos across different social media platforms. These videos, expressed in simple language, discuss the struggles of the citizens. Social networks have made it easier to promote this satirical criticism, which addresses the realities of Algerian society.

There are many reasons that have led to the emergence and spread of satirical content in digital media, which is referred to as digital satirical content. These reasons include social, economic, and political factors, as well as personal reasons related to an individual's private life and relaxation. Given the rapid developments in digital media technologies and the continuous appearance of new technologies, this has contributed to a significant leap in satirical content in digital media, making it difficult to distinguish between authentic satirical content and fabricated satirical content. Both types heavily rely on artificial intelligence applications, which play an important role in developing digital satirical content.

Satire, the broadest form of humor and laughter, is considered a phenomenon that stems from the contradictory human soul, which tires of the seriousness, discipline, and strictness of life. It seeks relief through humor, lightheartedness, and venting out pain, even if only for a few minutes. Satirical content in our era forms a complex media phenomenon with philosophical and critical dimensions. Its role has exceeded traditional entertainment functions to become an effective tool for political education and promoting critical thinking.

In the digital context, satirical content emerges as a new driving force challenging the prevailing systems, thanks to its ability to reach broad audiences through interactive platforms. With the aid of artificial intelligence applications, satirical content no longer relies solely on text but incorporates images, videos, and other digital media and tools to reframe political and social issues in a concise and impactful way. This approach highlights the potential of digital satire to evolve into a multidimensional critical discourse, blending analysis and creativity in a context that seeks to expose contradictions and reshape societal awareness.

Those who observe today's digital content will clearly notice the diversity of forms and styles that reflect the nature of the content presented. This has led to a noticeable convergence between satirical, entertaining, and trivial content. Such convergence has created a conceptual dilemma regarding the boundaries between these categories, making it increasingly difficult at times to draw clear distinctions. This ambiguity raises critical philosophical questions about the essence of each type, the limits of expression that govern them, and whether all forms of satirical critique are legitimate—or if there are boundaries that should restrict them.

On the other hand, more complex questions arise when we talk about digital spaces, particularly regarding the transgressions that creators of satirical digital content may commit, and the extent to which these transgressions affect the public sphere and the digital environment as a whole. Can these spaces turn into an open arena for all forms of satire without restrictions? Or is there a need for regulatory frameworks to control this flow? How can we understand the relationship between satirical content and digital public spaces, especially regarding the artistic methods used by the creators of such content?

Satirical digital content based on artificial intelligence applications is not limited to those with talent or specialists alone. Anyone with even a minimal knowledge of AI tools can now create satirical digital content. Social media platforms have provided the tools, mechanisms, and resources needed to learn and apply these modern technologies. Due to the interactive nature of digital media, it has become easy for users to engage with satirical content—whether in text, image, or video form. Moreover, users now have the ability to modify this content by adding to or deleting from it, thanks to the significant advances we are witnessing in artificial intelligence applications.

Although satirical content carries negative aspects that manifest in various areas of life, viewing the art of satire from a positive recipient's perspective allows us to understand how users interact with satirical texts, images, or videos. These are perceived as critical content with an intellectual dimension that reflects a conflict between

prevailing social and cultural values. At its core, satirical content rejects the boundaries imposed by social, political, cultural, or religious frameworks and seeks to break the restrictions on freedom of expression. However, this understanding raises questions about what is considered “ethical” within certain societies—particularly in our Eastern communities—and how such a concept can vary significantly from one culture to another.

The digital environment has become fertile and well-suited ground for the dominance of artificial intelligence applications, due to its possession of advanced technologies that have significantly contributed to fundamental changes in the content disseminated through digital media. Whether related to politics, economics, art, literature, or other types of digital content, these materials now reach users at incredible speed. Moreover, users can access satirical content in real time, especially when it is delivered through live video streams.

The role of artificial intelligence applications is not limited to producing satirical digital content in the form of texts, images, or videos. It has gone further to include the creation of entire programs based on satirical content, whether through podcasts or satellite channel platforms, which have seen a significant surge in recent times.

Although satirical content sometimes carries noble objectives aimed at correcting the wrongs caused by humans in various fields, the involvement of artificial intelligence in satirical digital content has led to numerous problems—especially when it involves individuals’ personal lives. This has significantly contributed to the emergence of what is known as “cyberbullying,” which in turn has sparked many disputes and conflicts within the same society. Therefore, it is crucial to consider the seriousness of artificial intelligence’s impact on media content, as it has come to dominate many areas of life to the extent that some human roles have been replaced by AI applications, which have taken over many functions once performed by people.

From this point, it is important to identify the main types of satirical digital content used in artificial intelligence applications.

- **Satirical videos**, considered among the most complex artistic methods, require manipulation of

object proportions—enlarging, shrinking, lengthening, or compressing. This manipulation involves a technical standard and demands knowledge of artificial intelligence applications, which play a prominent role in this area. The aim of satirical videos is to deliver sharp criticism within a humorous and entertaining context. However, the style and content of satire differ from one era to another and vary from one creator to another. (Riham Ali Nuweir, 2020, pp. 3450–3463)

- **Internet memes**, which are units of “image macros,” are simply memes shared via digital means such as blogs, message boards, and social media. These often involve captions and are intended to be re-captioned and reshared. An internet meme may consist of a snippet of text, an unnamed image, a video clip, or any other type of digital content. (Ross, S., *Afterlives in Viral Satire*, 2017, pp. 289–301)

- **Satirical games**: These are video games that use satire and humor to comment on political life, aspects of society, or human behaviors. The main goal of such games is often to highlight social flaws or absurd situations.

- **Satirical songs**: These involve replacing many of the lyrics of famous songs with humorous or sarcastic alternatives. Popular songs are often adapted and reformulated in a satirical manner. Satirical songs are known for their widespread popularity and rapid circulation and are frequently used by activists for various purposes and goals. Artificial intelligence applications play a significant role in this context through advanced technologies that have transformed not only the content of digital media in terms of substance but also its objectives—whether on a personal or official level. (Riham Ali Nuweir, 2020, pp. 3450–3463)

From here, we can highlight some of the artificial intelligence applications that have played a prominent role not only in satirical content but also in digital content in general. These applications include the following:

- **ChatGPT**: A chatbot that primarily relies on artificial intelligence and is capable of understanding natural human languages and generating written texts with precision in a human-like manner.

- **Midjourney:** A generative AI platform that creates images based on textual descriptions. Notably, this program is now used by television programs, magazines, newspapers, and institutions.
- **Synthesia:** This platform specializes in creating realistic visual content (videos) of virtual characters from written scripts within minutes. Users can create an account, input the desired script to be narrated by the virtual character, and the AI-powered Synthesia platform will generate the visual content. (Al-Muttahida, 2023)

Conclusion

Ultimately, this represents only a small glimpse into the vast and complex realm of artificial intelligence, which has deeply integrated into nearly every aspect of human life—most notably in the realm of digital media, including satirical content. Its growing presence has, directly or indirectly, shaped human behavior and transformed social relationships. Consequently, many experts and specialists regard artificial intelligence as one of the most formidable and potentially perilous outcomes of the technological revolution and the information and communication age.

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