Published in the USA
Media Education (Mediaobrazovanie)
Issued since 2005.
ISSN 1994-4160
E-ISSN 1994-4195
2024. 20(2): 227-238

DOI: 10.13187/me.2024.2.227
https://me.cherkasgu.press

Metaverse in Media: Understanding Digital Traces Towards Futuristic Technologies in India

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Abstract

Metaverse has established itself as the newest advancement in the current web world. The notion has garnered significant interest across multiple industries, the community, and particularly within academic institutions. It is the future gateway for any human-computer engagement. It intends to create an immersive digital space where users interact in real time with the virtual world and similar participants. The metaverse is a dynamic concept that is continuously evolving rather than being a phenomenon that can be easily examined. Therefore, the present study applied the sentiment analysis method to generate a new understanding regarding the notion of the metaverse. The study aims to determine the nature of Indian digital media content and whether it promotes or disapproves of the concept of the metaverse. Using the web scraping code, we generate a customized dataset, an excel file comprising 614 websites. The study aims to develop a systematic and standardized method for generating novel insights about the metaverse by analyzing current resources. The present analysis encompasses a broader range of online media, including news, blogs, and articles on the metaverse, in comparison to scholarly publications. The outcome demonstrates that the metaverse has a positive trajectory in mainstream media and will be a future technology for media, entertainment, and other internet-based industries.

Keywords: virtual world, augmented reality, extended reality, mainstream media, sentiment analysis.

1. Introduction

Metaverse is the future gateway for any human-computer engagement. It is still in its infancy, but the idea of a 3D comprehensive web in which individuals can interact, educate, trade, entertain, and work stretches back decades. In the Metaverse, augmented reality, mirror worlds, virtual worlds, and lifelogging create a new paradigm. However, we can detect metaverse expectations and develop designs in digital activities based on these technologies: TikTok's augmented reality filters, Google Arts & Culture's mirror worlds, Twitch's live logging, and Minecraft's virtual worlds are mixed reality successes (Onecha et al., 2023; Samarnggoon et al., 2023).

Concept, meaning, and definition

Neal Stephenson, an American sci-fi writer, introduced the phrase "metaverse" in 1992 in his novel “Snow Crash“ (Condon, 2023). He combines "meta" and "universe" to arrive at the term "metaverse.” The Greek word "meta" means beyond, and thus "metaverse" literally means beyond this world. Metaverse is a replicated technological ecosystem that blends the ideas of augmented

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reality (AR), virtual reality (VR), blockchain, and modern communication to create places for rich interactivity that mimic reality (Tucci, 2022).

In 2021, Lee and his fellow researchers stated, "at the root of the metaverse is the notion of the web as a vast, integrated, enduring, and common domain." They further said, "we characterize the Metaverse as a virtual world that combines tangible and electronic elements, made possible by integrating web and Internet innovations with Extended Reality (XR)." Finally, they add the essential attributes, "The metaverse should own eternal, common, simultaneous, and 3D digital places that are synthesized into visible virtual existence (Lee et al., 2021)."

In 2021, after Facebook switched its identity to Meta, the word metaverse became more prevalent. This idea will revolutionize the way we connect with the world. Mark Zuckerberg, CEO of Facebook, stated that "the next era of the web is metaverse" and that this latest influx will subsume established social platforms. Mark explains the Metaverse as "A digital ecosystem that allows users to communicate with others in digital places. It may be an internet you inhabit instead of merely viewing (Fawzy, 2022)."

Metaverse has established itself as the newest advancement of the current web world. It is a revolutionary opportunity to develop something truly innovative, like the initial stages of the Web. Billions of dollars are being poured into creating the Metaverse, which techno moguls call utopia.

Metaverse using machine learning

Metaverses connect virtual and actual worlds. It is one of the most promising 21st century ideas. Companies use web-3 technologies like cryptocurrency and NFTs to create a metaverse creator economy. The Metaverse offers unlimited job and leisure opportunities. It will be revolutionary or a web-2 monopoly in virtual reality in the next decade.

People who follow the business world do not want to refrain from writing down the technologies that will fuel the Metaverse. Because the Metaverse is evolving, many innovations that make it function are composed of multiple types of technology. Gartner, for example, uses the term "tech themes" to talk about metaverse technologies. Some themes include space-based computers, virtual persons, common interests, games, and digital assets. Metaverse tools are called "enablers of 3D development environments" by Forrester Research. Companies must hire people with skills in 3D modeling and the Internet of Things (IoT) to make digital twins (Shein, 2022). According to experts, the following seven innovations will influence the Metaverse's evolution over the next ten years: artificial intelligence; Internet of things; extended reality; brain-computer interfaces; 3D modeling and reconstruction; spatial and edge computing; blockchain.

PCs, mobile devices, AR, VR, and MR serve as metaverse entry points. Virtual reality technology hinders metaverse development and adoption. Graphics and portability are constrained by portable hardware and cost-optimized design. For visual immersion, lightweight wireless headphones struggle to achieve retina display pixel density (Wood, 2021). Hardware development seeks to enhance VR headsets, sensors, and haptic technology.

Implementations of the Metaverse utilize proprietary technologies lacking technical specifications. Transparency and privacy concerns generate interoperability challenges in the creation of the Metaverse. Many virtual environment standardization projects exist (D'Anastasio, 2021).

The Metaverse is a new notion with vast potential, raising existential issues. Virtual avatars will replace human interaction. Digitization reduces human empathy. Without social cues and human emotions, this virtual Metaverse may reduce empathy. Real-world difficulties raise concrete issues beyond philosophical ones (Bansal, 2022). The top three are below:

i. *Data privacy/security:* Metaverse proponents like Meta have been poor data guardians. These metaverse companies' extensive user data access may cause worry.

ii. *Monopoly/centralization:* Web-3 aims to fix web-2's centralization and monopoly. These monopoly problems may migrate to the Metaverse.

iii. *Monitoring:* track what is measurable. Metaverse technologies like wearable gear create this issue.

Metaverse, information and communication technology

The evolution of information and communication technologies influences the methods and media utilized for instruction. With Augmented Reality technology, students can experience learning with real-world items. Conventional models that portray how messages are delivered through traditional media are unsuitable for depicting how they are communicated (or shared) via new media. The former represents monologic (one-to-many) communication flows, whereas dialogic (peer-to-peer and many-to-many) communication flows dominate the new media

universe. However, authors in government and military circles tend not to characterize new media strategic communication as entirely distinct from conventional media strategic communication.

Metaverse intends to build an immersive digital space where users interact with the virtual world and similar participants in real-time. Recently, academia and industry have shown great interest in this notion, but many basic issues must be answered before the Metaverse can be realized. Multimedia is also a significant contributor, facing numerous risks but difficult technical difficulties. Among the most significant challenges to constructing a fully functional metaverse are the effective synthesis and creation of 3D interactive content, the optimal transmission of digital content, etc.

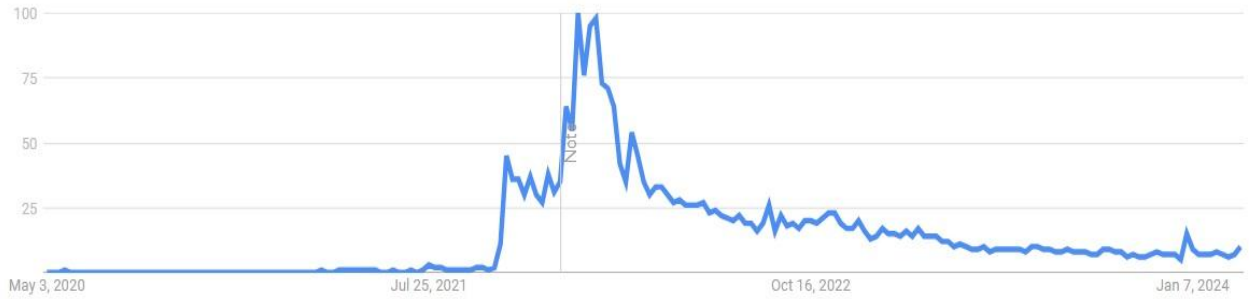

Fig. 1. Search volume for "Metaverse" over time in India (own diagram based on data from Google Trends retrieved 08 March 2024).

Figure 1 illustrates the search volume for "Metaverse" in India for more than the past four years (from 05 January 2020 to 08 March 2024). After 20 October 2021, the search trend begins to rise, and by mid-January (16-22 January 2022), it reaches its peak. After 1 December 2022, the trend remains continuing and stable.

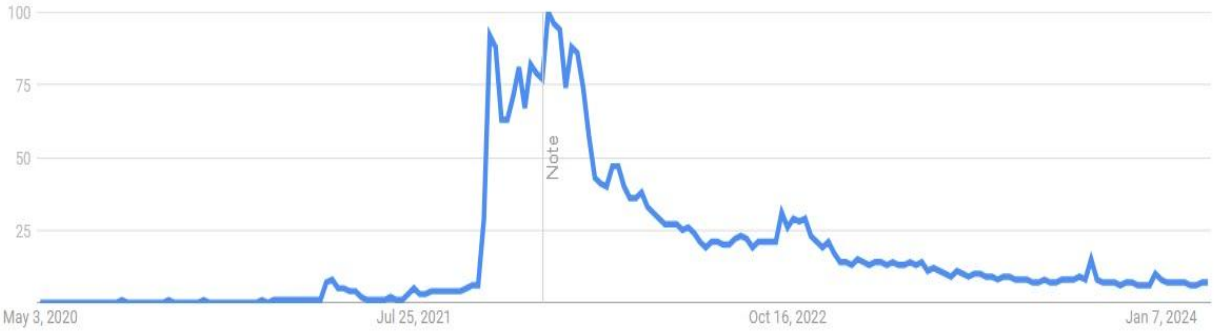

Fig. 2. Worldwide search volume for “Metaverse” over time (own diagram based on data from Google Trends retrieved 08 March 2024)

Figure 2 demonstrates the global search volume for "Metaverse" over more than the past four years (05 January 2020 to 08 March 2024). The number of searches for "Metaverse" peaks twice: first, in the final week of October 2021 (24-30 October 2021), and then again in the second week of January 2022 (9-15 January 2021). Global trends remain stable after 25 December 2022.

Metaverse incorporates various multimedia elements and needs a variety of methodologies to enable the development, creation, distribution, and presentation of these materials in an efficient and high-quality manner. Network communication, artificial intelligence, virtual reality hardware, and others must operate together to provide a complete solution. While tremendous progress has been accomplished over the past decade, continued investigation is required to expose the realistic virtual world to a broader end-user audience and permit engaging and comprehensive interactions for individuals (Chen, 2022).

Digital improvements in education are a major worry for learning materials in a new global era since innovation might usher in a new era. Educational games and simulations allow students

to study via digital media. Augmented Reality (AR) can help students obtain, manage, and understand instructional materials by transforming abstract concepts into three-dimensional objects. Students in the primary grades are in the stage of practical, functional reasoning; hence, all instructional components must be explained in detail (Marini et al., 2022).

Traditional media have no edge in the intense industry competition due to the rapid development of contemporary technologies. Radio and television, as important media, should respond to the times, vigorously integrate advanced techno principles and strategies, and explore new sector growth routes throughout the reform process. Incorporating the notion of "Metaverse" provides a fresh push for transforming traditional media. The ever-improving technology can overcome current obstacles and inject new vitality into the radio and television business (Cousins, 2022).

Communication in the Metaverse of deep media has begun. When profound media communication reigns supreme in the Metaverse, media forms evolve. It lets individuals "access" via interfaces to explore and perform. It is an "experience-based" form of media and questions the concept of communicating via short video media. The metaverse era will permit humans to utilize multidimensional and multimodal ecological diversity, multi-scenario, multi-industry, and multi-energy to shorten the spread of video media (Jiang, Xu, 2022).

The history of cinema is characterized by technological experimentation, spectator/spectacle relations, and production, distribution, and presentation processes that bind the medium to social, economic, and ideological constraints. Despite the film industry's technological and aesthetic diversity, Hollywood has dominated film production, distribution, and narrative formats. Digital media technologies challenge this hegemony and create ideal platforms for independent, experimental, and expanding cinema (Shaw, 2012).

Since 2021, "Metaverse" has been gaining popularity, and its association with cinema is apparent and inextricable. Nonetheless, the Metaverse film is implied to be much more than a sci-fi subgenre. Metaverse influences film through its meaning, cultural concepts, and technologies; merged into video installations, it can bring about a fundamental shift in cinema. It will alter the aesthetics, storytelling, and film distribution in every way (Lian, Li, 2024; Pillai, Prasad, 2023).

Importance of the study

The word Metaverse has garnered much attention from various companies, the public, and, progressively, scholarly societies. It necessitates a research-based, exhaustive, and widely agreed subject taxonomy. The Metaverse is simultaneously more of an evolving concept than an observable reality. The current research aims to determine the nature of Metaverse-related information in digital media. The study will assist in establishing a rigorous and consistent approach for creating new information about the Metaverse based on an analysis of existing material; hence, the research may serve as a useful foundation for future studies.

2. Materials and methods

Objectives of the study

Based on the existing content of the digital media, the research paper aims to generate a new understanding regarding the notion of the Metaverse. The outcomes of the study could function as the framework for future research.

Broad Objective: The overarching purpose of this study is to find out the nature of the content of mainstream media, whether it is promoting or disrating the concept of Metaverse.

Other Specific Objectives: Specific objectives of the present study are as follows:

– RO_1*:* To document the nature of content related to the term Metaverse in mainstream media.

– RO_2*:* To find out the sentiments of content related to the term Metaverse in mainstream media.

– RO_3*:* To explore the intent of the news/articles related to the term Metaverse in mainstream media.

Natural Language Processing

The news, blogs, and articles on Metaverse are available online. To understand how well the topic is trending, the authors use Natural Language Processing (NLP), a branch of Artificial Intelligence, to understand the message conveyed on the metaverse topic.

Web scrapping techniques

The data is collected online using web scraping. The websites collected are part of the dataset. Web scraping is a technique used to extract data from websites. It involves writing code to simulate

a user's interaction with a website, such as clicking links and filling out forms. The most popular library for web scraping is Beautiful Soup (Richardson, 2015), a Python library for parsing HTML and XML documents. Using the web scraping code, the authors generate a customized dataset, an excel file comprising 614 websites.

3. Discussion

Numerous studies exist that establish a foundation upon which further exploration of the metaverse can be conducted. Utilizing virtual mirrors, diverse media gadgets, and countless digital portrayals can offer significant contextual knowledge about theoretical foundations and empirical discoveries that can be further developed (Choi, Taylor, 2014; Krishen et al., 2013; Li et al., 2002).

M. Pradana and H.P. Elisa use bibliometric analysis to identify notable experts, important subtopics, and research opportunities. They also find essential articles, patterns, and subject clusters. Their key findings showed that 'education,' 'application,' and 'metaverse' were the most common and related. Their analysis suggests that 'challenge,' 'teaching,' and 'knowledge' are understudied. The findings conclude with recommendations for future research and an in-depth look at metaverses in education (Elisa, Pradana, 2023).

B. Brennen and E. Dela Cerna comprehend the emergent journalism practiced in Second Life–a computer-generated alternative reality – through an ideological analysis. They propose that journalism in Second Life should prioritize education and community development, scrutinize the impact of the virtual environment on the offline lives of residents, and present significant concerns regarding the protection of free speech (Brennen, Dela Cerna, 2010).

S. Hwang and G. Koo intend to explore the conceptual connection between audience attitude and behavioral intention using an audience's participation value in a metaverse platform performance and their choice to embrace it. The study found that aesthetics–the worth of performing on a metaverse platform – influenced performance viewing, and escapism affected metaverse platform use. In contrast, the metaverse performance did not affect audience education. This study will help us understand how to use space and experience marketing functions for metaverse performance and future communication (Hwang, Koo, 2023).

A. Venturini and M. Columbano study fashion's metaverse-based consumer values. They revised the five consumption values by including metaverse use, enhancing, and broadening the notion of consumption values. The five values are utilitarianism, social identity, personification, hedonism, and personal convictions. Fashion brand managers may use technology to provide innovative digital experiences and enhance customer engagement in the metaverse (Columbano, Venturini, 2023).

S. Chen and His fellow researchers employ an adapted conceptual framework combining destination competitiveness and stakeholder theory to demonstrate that various factors such as government, industry, tourists, local communities, and educational institutions impede the progress of metaverse tourism, while planning and management, economic, sociocultural, technological aspects, as well as recognition and acceptance contribute to its expansion (Chen et al., 2023).

P.L. Parcu and his research fellow analyze technology, enterprises, and industries that may be affected by metaverse futures. This is done to brainstorm how this technique will affect space. They differentiate between two evolving scenarios – the "metaverse shaped by reality view" and the "metaverse shaping reality view" – and their components, resulting in consequences for public policy planning (Parcu et al., 2023).

Z. Gao and X. Lyu present Planet Anima, a virtual environment designed for hosting virtual graduation events in the metaverse. They hosted a graduation ceremony and student art show online during COVID-19. Their Planet Anima user research examines collaboration and creativity. Planet Anima facilitates creative co-experiences according to their results. Headset VR exceeds desktop VR in presence, social presence, and emotional involvement (Gao, Lyu, 2023).

E. Sánchez-Amboage and his team conducted an analysis of the online tourist communication techniques employed by 20 European museums on the social media platform Facebook (Meta) during the COVID-19 pandemic. The findings of their study demonstrate the influence of lockdown measures on consumption and interaction patterns, as well as the effects of message content and presentation on user engagement and involvement (Sánchez-Amboage et al., 2023).

The Metaverse, the next significant iteration of the Internet, which the authors suggest will go beyond the Internet as a successor state to the Internet, will also change society. T. Cheng-Han and

D.S. Kiat-Boon explore several pertinent concerns that have the potential to challenge the legal system and its corresponding measures, particularly in the domains of online misconduct, intellectual property, and digital assets (Cheng-Han, Kiat-Boon, 2023).

The metaverse's long-term success depends on user adoption. Despite this importance, metaverse user acceptance research is scarce. R. Wu and Z. Yu integrate social and psychological dimensions like social engagement, social presence, conformity, emotional attachment, flow, and perceived enjoyment into the technology acceptance paradigm to fill this research gap. Their findings have substantial significance for metaverse designers and promoters (Wu, Yu, 2023).

A research report in "Rebuilding" said that COVID-19 has led to the rise of another digital economy. This digital economy has led to the creation of the metaverse. During COVID-19, digital, information, and communication technology grew quickly. It has made the metaverse possible (Asan..., 2021).

The coronavirus pandemic has made space for expanding the virtual and digital worlds. The metaverse is a digital platform built on the virtual and physical worlds. K.-A. Lee has analyzed ZEPETO, a metaverse-based virtual reality platform with a creative built-in program and virtual studio. They discovered that metaverse technology had produced a digital universe (Lee, 2021).

The metaverse is like a second existence where individuals live electronically. They inhabit their own constructed space, economy, and everything else. Secondary information was gathered from diverse sources, including Google, Web of Science, and Google Scholar. By creating a 3D representation in digital reality, they discovered that engaging in many daily activities such as working, traveling, shopping, attending school, and having fun in the metaverse will be possible. As the metaverse becomes a reality, it will bolster and modify existing study fields while revealing new ones (Narin, 2021).

L.-P. Robert and V.P. Robert wrote a research report in which they talked about a virtual city that was based on the Metaverse. They said that there are two kinds of metaverses in virtual city. Firstly, a virtual city with a million people who can move freely between different worlds. On the other hand, poor people with law resolutions have a heap of black-and-white avatars (Robert, 2003).

R.M. Gil and his research team investigate the dynamic Metaverse in their study, focusing on its connection with computer games and blockchain technology, which are the primary areas of advancement, and the resulting ethical and social consequences. They focus on the increasing influence of AI in gaming, examining its involvement in addictive gaming features, possible spread of negative habits, and reinforcement of cultural biases. They highlight the continuous expansion of the Metaverse, stressing the need for further study to create innovative interaction methods that include societal viewpoints and emphasize ethical protections. This will facilitate the responsible development of the Metaverse for the benefit of all involved parties. They also suggest Metaverse and Blockchain uses for copyright management, economic conflicts, traceability, and contract transparency (Gil et al., 2023).

M. Kniazeva with his team utilize qualitative research methodologies and a grounded theory approach to explore the motivating variables that motivate fashion companies to enter the metaverse. Analyzed publicly accessible website articles to discover similarities and differences in the motivating reasons that drive luxury and fast fashion firms into the metaverse. Their study improves comprehension of the metaverse as an operational vehicle for the fashion industry and offers pragmatic insights for industry professionals contemplating joining this virtual reality sector (Kniazeva et al., 2024).

D.-A. Frank and his fellows performed a study using virtual reality (VR) with 127 participants to investigate how the level of detail in a metaverse impacts customer reactions while shopping for food in a virtual store compared to just browsing. Their findings indicate that the level of accuracy in the metaverse does not have a widespread impact on how consumers react. Male consumers showed substantially lower repeat shop visit intentions after exploring the high-fidelity VR supermarket compared to the low-fidelity condition, but female customers reacted favorably. This discovery indicates that loyalty leads to creating replies tailored to certain goals, which are influenced by consumers' gender, highlighting the need to consider the context of consumer reactions in upcoming metaverse purchasing interactions (Frank et al., 2024).

Y. Chen and his teammates observed three phases in the U.S. metaverse's development. US metaverse growth is driven by deep business participation, cutting-edge research and technology, and the industrial chain. They also evaluate China's metaverse development issues in

terms of the standard system, data security and privacy protection, and growth route. Based on this, practical recommendations are provided for the development of the Chinese metaverse (Chen et al., 2024).

4. Results

Text summarization

Each of the websites mentioned in the dataset consists of a huge text. It is time-consuming for the reader to review each website and get the summary. NLP helps to automate the summarization of text. The text summarized from the website on Metaverse will capture the prominent words, projecting the concept, its applications, technology, etc. The transformers library is the latest library used for text summarization in natural language processing. It is a library that provides state-of-the-art pre-trained models for natural language processing (NLP) tasks such as text summarization. The library is built on top of PyTorch, and TensorFlow provides access to many pre-trained models, including BERT (Devlin et al., 2019) and its variants like GPT-2, XLNet, and RoBERTa.

In the dataset, a very interesting news article on “metaverse wedding” was found (Raju, 2022). The website was summarized into six lines of text using Python code. The snippet of the summarized paragraph is shown below:

“This article reports on a unique marriage reception hosted in Tamil Nadu, India, by an engaged couple. They became the first couple to host a virtual reception, or a "metaverse wedding," in the world, aided by their revolutionary use of the Mozilla Hubs platform and other virtual technology….”

The summarization becomes more insightful if visualization is done for the important words found in the context of the topic.

WordCloud visualization

Python library, known as WordCloud, can intuitively visualize the words in the summarized text and their prominence. WordCloud is a visual representation of text data, typically used to depict keyword metadata (tags) on websites or to visualize free-form text. It displays a list of words, the importance of each being shown with font size or color. This format is useful for quickly perceiving the most prominent terms and locating a term alphabetically to determine its relative prominence. The most popular library for word cloud in natural language processing is WordCloud (Mueller et al., 2018). It is an open-source Python library for generating word clouds from text. It is easy to use and has many features, including customization options and support for different fonts.

Figure-1 showcases the word cloud of the summarized text retrieved from a news article on “metaverse wedding” (Raju, 2022).

Fig. 3. Word Cloud of the summarized text of a news article on “metaverse wedding” (Raju, 2022).

The famous words have bigger fonts compared to less prominent ones. Some words captured are virtual, Metaverse, wedding, reception, and avatar.

Sentiment analysis

Sentiment analysis is a natural language processing (NLP) technique to identify and extract subjective information from text. It is used to determine the writer's attitude, opinions, and

emotions. Common libraries used for sentiment analysis include NLTK, TextBlob, spaCy, GPT-3. Generative Pre-Trained Transformer GPT-3 is an autoregressive language model, a deep learning model trained on large-scale datasets and designed to improve the performance of sentiment analysis tasks. It is the largest language model. GPT-3 is used for sentiment analysis by generating text that reflects the sentiment of the input text.

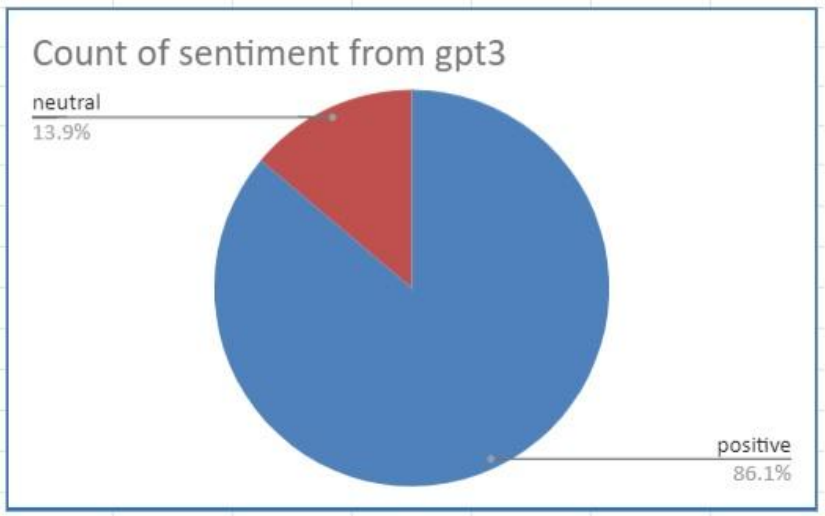

Fig. 4. Sentiment analysis of the summarized paragraphs on Metaverse

The sentiment analysis has been done on all the summarized texts, and it has been found that 86.1 % are positive sentiments, and the rest, 13.9 %, are neutral. It reinforces that Metaverse is considered a positive trend and will be one of the futuristic technologies.

Applications of Metaverse

Metaverse is becoming popular in many application domains, such as health and fitness, the medical field, eCommerce, Travel and Tourism, Teaching and Learning, Aerospace Modeling, interactive learning, and Architecture. The immersive experience for the end users makes it closer to reality – augmented or virtual reality. Further research is required for safety considerations of this technology to ensure end-user safety.

5. Conclusion

The metaverse might expand material reality through virtual and augmented reality technology, enabling individuals to communicate with avatars and holograms in physical and artificial situations. M.A. Al-Sharafi and his fellows conducted comprehensive research to recognize and classify the elements that impact the implementation of Metaverse. 29 out of 279 publications gathered from the Web of Science and Scopus databases. They proposed a comprehensive Metaverse adoption framework based on this categorization to guide future empirical studies. Presented many agendas to serve as a roadmap for future research on Metaverse adoption (Al-Sharafi et al., 2023). While M. Weinberger employed a modified variation of the meta-synthesis technique to study the available literature and formulate a description approach for the metaverse. After the preliminary investigation, he focused on 24 highly referenced research papers by topic (Weinberger, 2022). On the other hand, E.A. Firmansyah and U.H. Umar review metaverse literature related to the business discipline. Their research focuses on the metaverse of business and limits Scopus search results to business, management, accounting and economics, econometrics, and finance (Firmansyah, Umar, 2023). Relatively, the scope of the present analysis extends beyond academic publications and into the mainstream media. Analyzing 614 news, blogs, and articles from mainstream media websites provides insight into the content writing tendencies associated with the phrase "metaverse."

H. Gao and his fellow researchers examine the dynamics of metaverse research and analyze potential future research directions. The authors present comprehensive research agendas that address both technological and societal challenges (Gao et al., 2023). The current study provides more support for the concept that the metaverse is regarded as a favorable trend and is poised to become one of the leading technologies of the future.

A. Tlili and his teammates examined industrial metaverse research trends, implications, and obstacles using content and bibliometric analysis. They found that metaverse application in industries is still relatively in its infancy, with most research in education and health (Tlili et al., 2023). The present study, using semantic analysis, identifies favorable inclinations about utilizing the term "metaverse" inside mainstream media websites.

T. Wu and F. Hao indicate in their study that Edu-Metaverse can enhance instructional material, lower costs, and enhance quality and efficiency, but it also poses significant hazards (Hao, Wu, 2023). The present study introduces an organized and comprehensive framework for obtaining novel insights regarding the metaverse by leveraging pre-existing content from online mainstream media sources.

Vincent Mosco critically analyzes the cultural dimensions of the metaverse, presenting it as a contemporary iteration of a series of utopian concepts revolving around a digital domain of transcendence (Mosco, 2023). In the same way, the current study also identifies favorable inclinations about utilizing the term "metaverse" within the realm of mainstream digital media.

G. Profumo and his teammates conducted a comprehensive literature review of 34 articles published from 2009 to 2022. Their analysis focuses on the function of the metaverse in the fashion industry within the management and marketing domains. Their findings indicated that the field of literature is still in its early stages of development (Profumo et al., 2024). Meanwhile, Z. Lyu provides a literature review of the latest research on Human-Computer Interaction in the Metaverse. He chosen approximately 100 sophisticated research papers on the Metaverse from a pool of nearly 20,000 articles spanning from 2018 to 2023. The evaluation states that there will be a trend towards more 'invisibility' in the interaction between people and computers in virtual environments (Lyu, 2023). Conversely, G.D. Ritterbusch and M.R. Teichmann conducted a systematic literature review (SLR) to seek a more precise metaverse definition. They examined and aggregated scientific terminology and metaverse features from 381 research articles. They also situate the activity within the taxonomy framework to determine its scope (Ritterbusch, Teichmann, 2023). On the other hand, the current research examines 614 news items, blogs, and articles from conventional online outlets to discover fresh perspectives on the metaverse. The research affirms an encouraging propensity towards futuristic technologies in India. The current study establishes a systematic and consistent approach to generating new knowledge about the metaverse based on existing mainstream digital media content.

In conclusion, the metaverse serves as a compelling sign of the internet's transformative potential. The current analysis extends beyond scholarly publications to encompass mainstream media sources. The systematic examination of 614 news stories, blogs, and articles from mainstream digital media reveals a discernible pattern indicating the emergence of 'metaverse' content as a prominent trend in authorship. However, the analysis confirms that the metaverse has a favorable tendency and will be among the future technologies for media, entertainment, and other internet-operated working fields.

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