

EXPLORING THE SOUL OF ALGORITHMS: A DEEP DIVE INTO THE RISE OF VIRTUAL INFLUENCERS IN INDONESIA

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Abstract

The emergence of digital technologies initiated never-before-seen changes in the field of marketing, such as the introduction of virtual influencers. Cutting-edge computer animation techniques produce these personalities and are carefully crafted to interact with and sway the opinions of people online. This study intends to analyze the emerging virtual influencer phenomenon that is gradually unfolding in Indonesia's digital economy, giving particular attention to its evolution, effects, and specific strategies employed in contemporary marketing communication. The purpose is to chart the evolution of virtual influencers in Indonesia and assess their effectiveness as novel digital marketing tools. The approach taken in this study is qualitative descriptive to capture the virtual influencer phenomenon holistically in the context of Indonesia's digital landscape. The results of this study are expected to provide insights and recommendations for digital marketing actors, companies, practitioners, and researchers in designing effective marketing campaigns by utilizing virtual influencers. Computer-generated influencers, also referred to as virtual influencers, have heavy followings which are substantial in number. They are expanding the phenomenon of influencer marketing. These characters are very proficient in endorsing various products and services on different digital platforms, making them valuable marketing assets.

Keywords: Marketing Campaigns, Virtual Influencers, Digital Characters, Media promotion.

I. INTRODUCTION

In recent years, influencer marketing has become a much more popular practice. For the past few decades, celebrity endorsement has been one of the marketing communication strategies commonly used by

companies to promote their products and services, but now ordinary people (not celebrities) can also be used to be the target of delivering the message, which certain brands follow in conveying their beliefs. Especially now that

it is the digital era. Currently, ordinary people or ordinary people can become famous in cyberspace, follow media user trends, and have the potential to become influencers (Khamis et al., 2017). In addition, influencer marketing is considered the most cost-effective marketing communication trend and has the most effective impact on sales (Harrison, 2017 in Abednego et al., 2021).

Technological advancements continue to drive change in marketing, enabling companies to collaborate with artificial intelligence to achieve extraordinary results (Wirth, 2018 in Rustine, 2023). Artificial intelligence can produce more accurate marketing analysis, accelerate problem-solving and decision-making, create personalized shopping experiences for customers, and achieve increased sales and reduced costs (Haleem et al., 2022) (Ribeiro & Reis, 2020).

With the advancement of technology in the field of computer science, artificial intelligence has also emerged as a technological tool that can be used easily and quickly by people in everyday life, without even realizing that they are constantly interacting with the artificial intelligence (AI) used (Davenport & Ronanki, 2018) (Zega & Batubara, 2024). The Society 5.0 era is characterized by the existence of a human-

centered society, where humans are one of the main keys to technological and economic progress, adapting to problems by using systems that allow the integration of cyberspace and physical space to be more integrated (Lund et al., 2023).

Companies that incorporate very diverse types of visual elements may unintentionally inhibit processing and consequently, reduce the effectiveness of communication, instead of reinforcing their message. Consumers have to use a variety of cognitive resources to analyze the different elements simultaneously, taxing their processing capacity to the point where the perception of clutter takes over and affects perception and behavior. This is an urgent issue since mobile devices are becoming more commonplace for digital communication (van Rijn, 2024), and complicated visual presentations are especially harmful there due to small screens (Zhou et al., 2020) (Bashirzadeh et al., 2022).

A new phenomenon of the application of artificial intelligence in digital marketing that is increasingly popular and has great potential is the use of virtual influencers to help companies market their products (Mingkwana, 2022). Since its first appearance in 2016, virtual influencers have spread to various countries in the world and

have experienced several developments. Although several studies discuss virtual influencers at the global level, there is still little research that discusses virtual influencers in Indonesia and their role in marketing products and services (Rustine, 2023).

Social media influencers are independent third-party advocates who express their experiences and opinions through posts on blogs, Twitter, Instagram, and other social media. They shape public attitudes toward brands, causes, and other factors (Freberg et al., 2011) (Muntinga et al., 2011). Marketers use influencer marketing to reach customers, spread information, and influence perceptions of their products (Burke et al., 2017). With the amount of information available on the Internet, word-of-mouth is spreading at a rate never seen before. This is a great opportunity for companies because messages from personal sources have a greater impact on a company's reputation than information provided by the company (Escobar-Rodríguez & Bonsón-Fernández, 2017).

Consumers have shifted from conventional media, such as television, newspapers, and so on, to the Internet, according to previous research (Johnson, 2008 in Abednego et al., 2021). Internet consumption is also related to social media. Opinion leaders on social

media are called influencers, and celebrity groups are the first and most common social media influencers. Usually, they have a wide circle of influence because of media support (Senft, 2013).

Influencers as opinion leaders on social media can affect the attitudes and behavior that can motivate, persuade, or command their followers to do something (Mingkwon, 2022). Simply put, they can influence the purchasing decisions of their followers (Glucksman, 2017).

Social media influencers have three characteristics: (1) authenticity; and (2) interactivity. Authenticity means that followers trust that the influencer is a competent person and understands what they are saying or uploading on social media. Authenticity means that influencers show a real personality on social media. Interactivity means that influencers have good communication skills and a high level of interaction with their followers (Glucksman, 2017) (Mingkwon, 2022).

There are five categories of social media influencers: (1) Nano influencers Micro influencers; (2) Mid-level influencers; (3) Macro influencers; and (4) Mega influencers. Nano influencers have several followers of 1,000-10,000 followers. While Micro-influencers have some followers of 10,000-100,000 followers. Then

Mid-level influencers have 100,000-500,000 followers. After that, there are Macro Influencers who have 500,000 followers. Finally, there are Mega influencers with followers exceeding 1,000,000 followers (Senyapar, 2024). The higher the level of influence, the higher the cost of co-operation but the greater the effect (Nielsen, 2022).

Influencer marketing is an attempt to connect brands with highly popular social media users to promote the brand's products (Nielsen, 2022). Presenting a person attractive to the target group allows them to better evaluate the product until they finally decide to purchase and then become loyal consumers (Glucksman, 2017). Influencer marketing is a highly effective marketing strategy. Since the advent of social media, these partnerships have grown at an incredible rate (McKinsey, 2023).

Artificial intelligence (AI) programs that can process, analyze, and understand vast amounts of data like that of humans are the core focus of AI applications in marketing. Even though these practices are new, they already have a significant impact on the marketing strategies and campaigns that businesses use (Benabdelouahed & Dakouan, 2020).

Numerous managerial solutions are provided by artificial intelligence. We may now compare traditional KPIs for strategic solutions side by side with incoming communications from highly advanced consumers. Artificial intelligence marketing has made it such that data can determine whether a user is ready for a conversation or a transaction rather than the user having to ask (Tjepkema, 2018).

Because of artificial intelligence, we can now see, globally, what consumers are saying, thinking, and feeling about a particular brand or product—and all of this in real time. Similarly, this duty has gotten even more flexible and comprehensive with the emergence of social networks (Benabdelouahed & Dakouan, 2020).

There are undoubtedly numerous approaches to improving digital tactics and advertising in general; nevertheless, the use of artificial intelligence in marketing can lead to even more sophisticated and extensive data analysis. With the help of this technology, it is possible to take advantage of concealed Internet users' profiles on social media, their keyword searches, and other online data to provide a better offer or solution (Tjepkema, 2018).

Virtual influencers are made partly or entirely of artificial materials (such as digitally rendered

3D characters) (Miao et al., 2022). They interact with customers online, share content similar to that of real human influencers, develop their fan networks (Schouten et al., 2020), and draw interest from advertisers and marketers (Sands, Campbell, et al., 2022). On social media, especially on photo-based sites like Instagram, some virtual influencers can acquire a large following. With the evolution of marketing strategies, marketers are using AI in endorsement programs utilizing virtual influencers ((Thomas & Fowler, 2021); (Wang et al., 2023)

They are anthropomorphic to an extent. An avatar or robot can interact socially with humans in a meaningful way when it resembles a human in appearance or behavior (Huang et al., 2021). Anthropomorphism has the potential to improve the social presence of virtual influencers, leading to an increase in their perceived attractiveness (Ahn et al., 2022), competence (Müller et al., 2021), trustworthiness, and sociability (Mende et al., 2019). Customers may become more open to interacting with online influencers as a result. A strongly human-like appearance, however, may cause people to feel repulsion (Mende et al., 2019), which would reduce customer willingness to engage with virtual influencers

(Arsenyan & Mirowska, 2021) (Stein et al., 2024). This is in line with the Uncanny Valley theory. Source credibility is diminished by the growing social gap between consumers and virtual influencers (Sands, Campbell, et al., 2022). Furthermore, an overabundance of resemblance between virtual influencers and humans can obscure the distinction between humans and machines, leading to the perception of virtual influencers as potentially harmful and menacing entities (Müller et al., 2021). Thus, for companies using virtual influencer marketing, understanding the risks posed by these influencers and how to mitigate them or leverage them to boost company performance, is crucial (Meng et al., 2024).

Influencers on social media are mostly genuine people, but there are also virtual influencers—fictitious figures with human-like characteristics—that are made by computers. They resemble humans in terms of their physical characteristics, personalities, emotions, behaviors, values, and lives. Their social media posts, interactions, and avatars all exhibit human traits, which encourage strong connections among their followers and lead to their extreme popularity (Wibawa et al., 2022). Virtual influencers come in a variety of design styles, from

hyper-realistic 3D to 2D cartoons (Neoreach, 2022 in Rustine, 2023). Although millennials and Gen Z are the most intriguing target demographics, their application for older generations is not excluded (Moustakas et al., 2020). The industry of new media communication culture has progressively grown to be a significant driver of economic expansion (J. Li & Jin, 2024). They contend that the cultural sector is undergoing a significant transformation as a result of the ongoing advancements in digital technology and that the emergence of new cultural business models is giving the economy a boost. Simultaneously, digital technology fosters communication and cultural integration between cultures and opens up the cultural sector (; (X. Li et al., 2023)).

Marketing programs that employ digital technology to engage with clients and partners on an integrated platform or system to generate new value are known as digital marketing strategies (Kannan & Li, 2017) (Sridhar & Fang, 2019) (Sommarberg & Mäkinen, 2019) (Wu et al., 2024). Additionally, by using business intelligence, these strategies can implement multiple interactions to foster customer data collection and communication (Bhimani et al., 2019; Frank et al., 2019; Luo et al., 2021). They are also a

valuable strategy for enhancing an organization's marketing capabilities (Mention et al., 2019) (Wu et al., 2024)

Research on issues related to digital technologies and inventions based on them, their acceptance by businesses and consumers, and their revolutionary consequences is expanding. Several review articles offer an overview and analysis of previous studies and suggest future research directions on particular substantive areas related to digital, like digital marketing (Kannan & Li, 2017), digital transformation (Verhoef et al., 2021), digital social media and mobile marketing (Lamberton & Stephen, 2016), and marketing in computer-mediated environments (Yadav & Pavlou, 2014).

Digital innovation can be divided into three phases: digitization, digitalization, and transformation. They concentrate on how digital transformation might affect a company's cost structure and add value. Additionally, they speculate that (a) virtual agents and robots will replace human workers in businesses and (b) blockchain and artificial intelligence (AI) will help businesses optimize their supply chains and cut costs (Verhoef et al., 2021).

This study's data are presented utilizing descriptive qualitative approaches in its original,

unaltered form. The objective is to provide an in-depth description of a phenomenon or occurrence. The purpose of this study is to explain many variables related to the subject under investigation.

Using a system that focuses on social media trends from virtual influencer publications, the current study conducts a literature review. To find published studies about virtual influencers and other related topics, the authors searched electronic databases for article titles and abstracts. Each work's abstract and title were scanned as part of the screening process carried out by this study. A paper or journal that satisfies the criterion requirements was chosen. Then, the data was obtained from searches on social media from the accounts of popular virtual influencers.

The objectives of this research are to examine the development and application of virtual influencers in Indonesia as well as their potential as new media to boost digital marketing communication strategies. This study aims to pinpoint the special advantages that virtual influencers provide, namely their capacity to adjust to many cultural settings and captivate audiences with imaginative and engage the audiences with "crafted" storytelling. Furthermore, it seeks to assess how well virtual influencers link with their

followers, as demonstrated by their higher engagement rates than those of real influencers. Additionally, the study looks at the difficulties that come with using virtual influencers, such as threats from hyperreality, ethical concerns, and trust issues.

II. DISCUSSION

Virtual influencers or AI influencers have currently experienced development in recent years. This development is driven by advances in graphic technology and artificial intelligence. They are now able to appear with increasingly realistic appearances and can interact dynamically with audiences through social media. Many brands are utilizing these characters for marketing campaigns, creating interesting and relevant narratives without the risk of unpredictable behavior that often occurs with human influencers. In addition, virtual influencers can adapt to various cultures and languages, making them an effective tool for reaching the global market.

The market for virtual influencers is expected to reach a valuation of USD 3.60 billion globally by 2022 and expand at a compound annual growth rate (CAGR) of 38.9% between 2023 and 2030. The drivers driving the market's growth include the constantly changing digital landscape

and the expanding global usage of social media. More and more virtual influencers are providing brands with more creative flexibility (Grand View Research, 2024).

The fashion industry's evolution is driven by virtual influencer solutions offering creative freedom and cost-effective scalability. Marketers in fashion leverage virtual influencers to align with campaign objectives, expressing brand values while targeting customer segments effectively. Key organizations launch new avatars and technologies to enhance user experience. For example, TopSocial India introduced a virtual influencer named Sravya in December 2022, catering to the South Indian market. The COVID-19 pandemic impacted global industries, but positively affected the virtual influencer market as more people turned to online platforms. Ongoing advancements in virtual influencer technology are meeting consumer demands for authenticity and transparency, driving market growth (Grand View Research, 2024).

Customers are also becoming more interested in virtual influencers; 32% of millennials follow accounts on Twitter or Instagram that they are aware are not actual persons. Regarding interaction, users engage with virtual influencers on Instagram at a rate that

is almost three times higher than that of real influencers. It's crucial to remember, though, that online influencers can still spark controversy. For example, after a Calvin Klein campaign in which she was shown kissing American supermodel Bella Hadid, Lil Miquela was criticized and faced backlash for engaging in queerbaiting. Shudu, a different virtual influencer, has also generated controversy after being called a "digital projection of real-life black womanhood by a white man" (Sands, Ferraro, et al., 2022).

Even if it could spark debate, the usage of virtual influencers is growing quickly. Marketers need to be aware of the opportunities and problems presented by virtual influencers, especially because artificial intelligence (AI) has the potential to completely transform the marketing industry (Campbell et al., 2020).

The solution segment dominated with over 69% market share in 2022 due to the demand for simplified integration of virtual influencers. The services segment is forecasted to have the highest CAGR from 2023 to 2030, benefiting from various offerings like consultancy and advanced technology for audience engagement. Specialized service providers are aiding brands and agencies in the effective management of virtual influencers. The fashion &

lifestyle segment had the highest revenue share in 2022 and is expected to maintain dominance. Virtual influencers are popular for promoting various products in this sector. The food & entertainment segment is projected to grow rapidly from 2023 to 2030, with virtual influencers being used to target younger audiences and create hype for new events and projects in this industry (Grand View Research, 2024).

With a market share of more than 44% in 2022, the North American region saw the biggest growth. There are several well-known social networking sites in the area. Virtual influencers are being used by businesses in a variety of sectors, including fashion, beauty, and entertainment, as part of their marketing plans. Among the most well-liked virtual influencers in the area are Avery from Canada and Lil Miquela from the United States. The region's market is expected to rise as a result of consumers' growing emphasis on social media and companies' growing investigation of novel approaches to consumer targeting (Grand View Research, 2024).

Over the projection years, the Asia Pacific region is anticipated to develop at the fastest CAGR. Numerous causes are responsible for the growth, such as the increasing demand for creative marketing approaches, population

expansion, and the expanding uptake of social media platforms. The trend of virtual influencers is leading nations like China and Japan. Virtual influencers are also seeing major growth potential in the Asia Pacific region as a result of brands integrating them into their marketing initiatives (Grand View Research, 2024)

The data above illustrates how the Indonesian market is one of the Fastest Growing Markets, which has enormous potential to become big in the future.

Hyperreality is a state where the representation seems more real than the object represented (Baudrillard, 1994). Hyperreality related to technological advances, the internet, digital technology, and electronic screens is the concept that what appears on an electronic screen feels more real than physical reality. The strategy of simulacra (simulation of reality), on the other hand, allows you to shift actual reality and replace it with a pseudo-reality created by the hyperreal nature of simulacra (Oktavianingtyas et al., 2021).

Jean Baudrillard's theory of hyperreality is particularly relevant in the context of virtual influence as it focuses on the shift between reality and simulation, where signs and images become more real than reality itself.

- 1) Virtual influencers Simulations and

representations are entirely digitally constructed entities, often creating personas that appear more appealing than real people. This creates a simulation that can blur the distinction between the real and the unreal.

- 2) **Identity Construction:** Virtual influencers are created with images that represent the desires of their audience. They can be programmed to develop idealized identities, raising questions about authenticity and authenticity.
- 3) **Impact on Social Reality:** The influence of influencers who exist in virtual worlds can impact social norms and expectations, creating a hyperreality where viewers internalize the images shown. This can change previous views about life, beauty, success, and so on.
- 4) **Interaction and Engagement:** Virtual influencers can create experiences that seem real by interacting with their followers, even though they are not in the real world. This is an example of how the distinction between reality and simulation is becoming increasingly blurred.

Therefore, using a

hyperreality perspective to study virtual influence allows for a better understanding of how digital media shapes social reality and identity.

The beginning of the trend of the emergence of virtual influencers occurred in 2016. It began with the emergence of Miquela Sousa better known as Lil Miquela. Lil Miquela represents a 21-year-old virtual influencer from Los Angeles. She has a very large following of 2.5 million followers. She is widely used in the context of marketing communications. After a while, other virtual influencers emerged.

Many famous brands or those that are currently trending use Lil Miquela's services for promotions on their social media. Like one of the ChatGPT applications which is also based on AI that uses her services for promotion.

Not only applications, but also various brands from the fashion and food and beverage sectors that have not missed using their services. Then, don't forget other virtual influencers, such as Lu Do Magalu, Guggimon, Imma, Bermuda, Shudu, Blawko, and Kenza Layli.

Lu Do Magalu who has an Instagram account called magazineluiza also does several promotions on his Instagram account from fashion, electronics, food, and so on. The uniqueness of this

virtual influencer that is not found in other virtual influencers is maximizing the Instagram shop feature.

Not to forget Guggimon, who is a figure in the form of a kind of rabbit character. His uniqueness is that he is a figure who is trusted to promote a game, Fortnite. Not only that, he was even made a special character in the video game.

There is also a Japanese virtual influencer who is already world-famous, namely Imma who has an Instagram account called *imma.gram*. Imma also did not escape from promoting various fashion, electronics, food, and other brands. Imma is quite often invited to big events such as the Apple Worldwide Developers Conference where she was invited directly by the technology giant, Apple. Not only that, she was also invited directly to be a guest star in a famous talk show, namely TED Talks.

The next famous virtual influencer is Bermuda with an Instagram account called *bermudaisbae*. Bermuda was designed to be the brother of Lil Miquela. Her Instagram feed is also dominated by photos with Lil Miquela. There is something unique about this Bermuda. He collaborated with legendary musician Red Hot Chili Peppers to cover the song "Under the Bridge". The news about him singing the song was

quite trending, decorating various news reports.

The next famous virtual influencer is Bermuda with an Instagram account named *bermudaisbae*. Bermuda is designed to be Lil Miquela's sister. Her Instagram feed is dominated by photos with Lil Miquela. There is something unique about this Bermuda. She collaborated with legendary musician Red Hot Chili Peppers to cover the song "Under the Bridge". News about her singing the song was quite trending and adorned various news reports.

Then not only dominated by women, there is also a virtual influencer who represents a man, namely Blawko with the Instagram account *blawko22*. He is also widely trusted to promote various food, fashion, and technology brands. He often takes photos with the most famous female virtual influencer, namely Lil Miquela. Then he was also trusted to promote AliExpress which is one of the world's top marketplaces.

Even in the realm of AI, there is a beauty pageant for these AI characters or humans. The event is called Miss AI which was first held in 2024. Something is surprising about the event, namely that it was won by an AI figure from Morocco who wears a hijab. The figure is named Kenza Layli. By winning the Miss AI event,

she became even more famous and is now a famous and trusted virtual influencer. She is also widely trusted to promote tourism in her country. Then she was also trusted for various social campaigns.

In addition to the number of followers, the engagement rate can also be a reference for the credibility of a virtual influencer. According to The Influencer Marketing Factory in 2022, virtual influencers have an engagement rate that is almost three times higher than that of real human influencers. For more details, especially the latest engagement rate, researchers also conducted calculations using the Social Blade and Hype Auditor applications (if not recorded in Social Blade) which can analyze engagement rates from Instagram and TikTok social media. Table 1 shows the number of followers and engagement rates of virtual influencers in the world.

Table 1. Number of Followers and Engagement Rate of Global Popular Virtual Influencers

N o.	Na me	Nu mb er of In- sta gra m Fo llo	In- sta- gra m En- gag eme nt Rat e	Nu mb er of Tik tok Fol lo we rs	Tik tok En ga ge- me nt Rat e
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		we rs			
1.	Mi- que la Sou sa	2,5 m	0,5 2%	3,4 m	0,9 3%
2.	Lu Do Ma gal u	7,2 m	0,0 1%	7,3 m	3,7 6%
3.	Gu ggi mo n	1,3 m	0,1 9%	11, 7m	-
4.	Im ma	39 3k	-	-	-
5.	Ber mu da	22 1k	11, 52 %	4,5 k	-
6.	Bla wk o	12 1k	6.9 3%	-	-
7.	Ken za Lay li	20 1k	0,1 2%	50, 4k	-

From the data above and before, it can be seen that although there was a decrease in engagement from previous studies, there was an increase in the number of followers. The dynamics of global virtual influencers are increasingly colorful and still have the credibility to contribute to the world of digital marketing communication media. The use of AI characters in Indonesia is indeed not as massive and

highlighted as in the global arena. The use of AI characters in Indonesia began to be highlighted after the use of AI characters on the Indonesian presidential and vice presidential candidate pair number 2 in the 2024 Presidential Election.

The use of AI has increased rapidly since early 2023, and the Prabowo Gibran Pair utilized it in their political campaign to attract the attention of Generation Z. They used the term “*gemoy*” to describe the AI campaign poster featuring an illustration of Prabowo Gibran in a chibi style. Prabowo currently looks friendlier and often dances, which is a contrast to his fierce and assertive image in the past. This AI poster and the “*gemoy*” concept help build an attractive image for Generation Z and millennials. The pair are effective in using mass media to enhance their political branding, with offline and online campaigns carried out through billboards, banners, and print advertisements (Maulana et al., 2024).

The social media platforms that are utilized for this type of online content are Instagram, TikTok, and Twitter. National Victory Team (TKN) optimizes this social media by posting news articles about Prabowo-Gibran's activities. As a result, both social media platforms constantly

inform their followers about the new developments and activities carried out by these two candidates, which causes the public to constantly become aware of these activities and become closer to Prabowo-Gibran. However, if you have been regularly viewing posts on one social media platform, such as Instagram or Twitter, then the algorithm on those platforms will continue to display their posts, making this one of the few developments that will negatively impact the choices made by the general public in the upcoming 2024 election. This is consistent with the hypothesis of the hypodermic needle, according to which mass media can have a significant negative impact on audiences. Prabowo-Gibran not only conducts political campaigns, but he also implements a strong and effective branding strategy, as well as a proper and effective positioning, making him a successful example of political branding in Indonesia (Sihabudin et al., 2023).

The use of AI characters on social media in Indonesia existed before the emergence of AI characters Prabowo-Gibran, but it has not been highlighted like it is now. The emergence of the first virtual influencer in Indonesia is claimed to be marked by the emergence of one of the virtual influencers named Lentari van

Lorainne familiarly called Riri. Riri has an Instagram account called *Lentaripagi*. Riri is described as a Sundanese-Dutch mixed woman. There is a lot of interesting content that she publishes on her Instagram account page. She also receives a lot of endorsements from various brands of food, drinks, fashion, and even cough medicine. She was also trusted to promote a national music concert event.

The next virtual influencer from Indonesia is Cahaya or familiarly called Aya who has an Instagram account called *Cahaya.gram*. Aya's uniqueness is that she often does charity activities in her Instagram feeds & stories. She has also collaborated with famous Indonesian celebrities, namely Boy William and Anastasia Siantar. Aya has also been trusted to promote traditional clothing brands and traditional Indonesian drinks.

There is also a virtual influencer who was once featured in Forbes magazine, namely Thalasya. Thalasya shared in her Instagram feed that she is proud to advance Indonesia through her coverage in Forbes magazine. She is also often trusted to promote various fashion brands. There is even a LINE chat application sticker in the form of her. However, in the last 4 years she has been seen to be inactive on her

Instagram social media. It is not clear why she suddenly disappeared.

Although Thalasya seems to have “disappeared”, there is still Arbie Seo who is scripted as her younger sibling. Arbie Seo is represented as a teenage girl who is currently in high school. On her Instagram account, Arbie has the content “*Warung Depan Sekolah (WDS)*” which is a short sitcom. She has also been trusted to promote fast food and music events.

Lastly, there is a virtual influencer named Laverda Salsabila or familiarly called Lav Caca who was introduced by a dangdut music platform, *Ujung-ujungnya Dangdut (UUD)*. She was introduced by a famous Dangdut & Javanese singer, Denny Caknan, who also became her duet partner in a song. She also often posts her activities with Denny Caknan. Lav Caca is the first metahuman dangdut singer in the world. Lav Caca is expected to be able to introduce dangdut music widely to the younger generation. Not only that, Lav Caca is also often trusted to promote various brands that collaborate with her. Then she was also appointed to promote a social campaign and an event.

In addition to the number of followers, the engagement rate can also be a reference for the credibility of a virtual influencer. According to The Influencer

Marketing Factory in 2022, virtual influencers have an engagement rate that is almost three times higher than that of real human influencers. For more details, especially the latest engagement rate, researchers also conducted calculations using the Social Blade and Hype Auditor applications (if not recorded in Social Blade) which can analyze engagement rates from Instagram and TikTok social media. Table 1 shows the number of followers and engagement rates of virtual influencers in the world.

Table 2. Number of Followers and Engagement Rate of Indonesia Popular Virtual Influencers

No.	Name	Number of Instagram Followers	Instagram Engagement Rate	Number of TikTok Followers	TikTok Engagement Rate
1.	Len tari	256k	2.26%	103k	-
2.	Ca-hay a	3,2k	13.34%	502	-

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3.	Tha lasy a	455k	0.98%	-	-
4.	Ar-bie Seo	332k	0.72%	1,3m	-
5.	Lav end er Sal-sa-bila	18,6k	0.40%	24,5k	-

From the data above and before, it can be seen that although the dynamics and digital activities of Indonesian virtual influencers are not as colorful and advanced as global virtual influencers, their development is also worth highlighting. From the followers and engagement rate data, Indonesian virtual influencers are also not inferior and can be relied on in digital marketing communication in the local Indonesian realm.

The term "artificial intelligence" is now widely used in research, technology, and popular culture. It is changing everything and having a significant impact on the entire planet. In the future, it will govern the entire planet. Machines will soon be able to conclude in the same ways that people do. In social media, artificial intelligence is always setting new records. Given that it enhances user experiences and helps firms better serve their customers, it has

a bright future in the social media sector. The following are some possible ways that AI technologies will impact the social media industry (Zilles, 2019). AI will make it easier to discern between qualified and unqualified leads; provide more robust buyer and customer profiles; allow bots to engage with prospects on nearly any topic; and enable the generation of hyper-personalized marketing communications (Sadiku et al., 2021).

In this discussion, several important points need to be considered regarding the phenomenon of hyperreality, artificial intelligence, and its dynamics related to the use of virtual influencers, especially in Indonesia. First of all, the emergence of virtual influencers illustrates how rapid the development of artificial intelligence (AI) technology is and raises questions about the boundaries between reality and representation. This is following the concept of hyperreality introduced by Jean Baudrillard, where digital images increasingly replace or create images that are stronger than reality.

The use of virtual influencers has advantages and disadvantages or pros and cons. Virtual influencers have the benefit of being malleable characters who can evolve their identities as needed and do not age or pass away (Mingkwon, 2022). Since content creators

have strong control over what they publish, they can avoid uploading harmful content, and they don't have an "offline life" that could damage their "online persona" (Moustakas et al., 2020). The drawbacks include the absence of credibility and trust (Conti et al., 2022), the high cost and potential for legal issues (Moustakas et al., 2020), and uncertainty over the appreciable variations in business outcomes between actual and virtual influencers (Sands, Campbell, et al., 2022).

Virtual influencer marketing offers a lot of potential, despite all the drawbacks (pros and cons). According to data from The Influencer Marketing Factory in 2022, nearly half of millennials and half of gen z had bought products recommended by virtual influencers, with 67% of millennials and 75% of gen z following at least one virtual influencer on social media. This tactic will be used more and more in a variety of industries, including politics, education, gaming, fashion, music, and cinema (Wibawa et al., 2022). This is because it adds a new dimension to marketing in digital media.

As AI advances and changes, social media networks will continue to be impacted by it. The possibilities are endless when it comes to AI in social media. Social media and AI are proven to

be a very advantageous mix for businesses. For any company using AI tools, the future is promising and exciting. AI will undoubtedly have a significant impact on the media markets (Hendler & Mulvehill, 2016).

III. CONCLUSION

As communication technology has advanced, new opportunities have also arisen in the virtual influencer market. Virtual influencers are thought to be more profitable in terms of expense, control over material, and time due to their human-like qualities. The resemblance between virtual influencers and humans nevertheless results in many drawbacks, like their inability to communicate emotions and their ability to manipulate audiences by endorsing things that undermine the trustworthiness of the information they share.

Instagram and TikTok, as media platforms, create a virtual world that is getting closer to reality and offers new opportunities in many areas, such as education, entertainment, and industrial simulation. Influencer marketing is benefiting from the fast growth and strong demand of the virtual influencer movement. Virtual influencers play a crucial role in promoting a variety of products and services online. One such influencer, based in Indonesia, is active on Instagram and writes

about different companies in partnership with well-known firms. In addition, the participatory method that virtual influencers use to establish a connection with their followers fosters a friendly bond. Virtual influencers work to foster a sense of community among the online community.

There are various restrictions on this study. First off, there is still little direct involvement, and the observation method is still restricted. It is anticipated that future studies will employ a deeper approach to examine the business processes of the virtual influencer sector. Second, this study looks at the future, prospects, difficulties, and trends for virtual influencers. To enhance the findings academically, future study is anticipated to be able to investigate the role of virtual influencers on shifts in audience attitudes in addition to research from the ethical and political-economic components of the media.

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