

# The Impact of Artificial Intelligence on Trustworthiness and Authenticity in Green Influencer Marketing

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## ABSTRACT

In recent times, influencer marketing has become one of the crucial components of digital marketing tactics. We are living in a social media age where social media influencers have become the key voices in all fields and influencer marketing initiatives are becoming increasingly successful. They have started integrating AI into their content, analysis and audience engagement processes which can be of great benefit to them but at the same time, it presents new challenges for authenticity and genuineness. The findings of the research show the positive impact of Artificial intelligence on Influencer marketing but at the same time, it also aims to identify the challenges faced in green influencer marketing and how AI impacts its perceived trustworthiness and authenticity across major social media platforms including Instagram, and YouTube. Through analysis of sustainability-focused posts from influencers and survey responses from their followers, this paper examines the difference in impact between AI-enhanced content and authentic content.

It also identifies how followers respond to AI influencer preferences and how this affects trust, particularly in AI-generated content. The findings also contribute to emerging theories of digital authenticity in social media marketing.

**Keywords-** Artificial Intelligence, Green Influencer Marketing, Social Media Influencers, Digital Marketing, AI influencer, perceived trustworthiness.

## I. INTRODUCTION

Social media influencer (SMI) marketing is more popular than ever, with companies expected to spend \$15 billion just on influencer marketing in 2022. (Forbes, 2022). Social media is growing in popularity as a result of everyone having access to mobile devices and the internet. The Digital in 2021 Global Overview report states that about 54% of the world's population (4.2 billion) used it in 2021, a 13% increase (490 million) over 2020.

Influencer marketing has evolved into a crucial component of digital marketing strategies, particularly in the age of social media. It is a powerful branding and marketing tool to increase brand salience and attract social media users, especially Gen Y, Gen Z and millennials, toward brands (Jhawar et al, 2023). Influencer marketing, which involves encouraging social media influencers (SMIs) to share sponsored business

promotions, has grown in popularity recently and is predicted to bring in over \$33 billion by 2027 (Giuffredi-Ka'hr et al., 2022). More and more businesses and organisations use influencers to promote their products and services on social media (Cabeza-Ramírez et al., 2022).

Social media influencer marketing is a growing area and is becoming an inevitable part of the marketing mix of companies (Dewangan et al 2022). Social media influencers wield significant influence in various fields, including sustainability and environmental advocacy, often referred to as "green influencers" (Narayanan, 2024). These influencers play a pivotal role in shaping public perceptions about eco-friendly practices, sustainable products, and corporate environmental responsibility. In addition to engaging in environmental advocacy, green influencers frequently draw attention to concerns about sustainability, nature, the environment, waste minimisation, and other relevant topics (FeedSpot

2024). Even though some green influencers engage in dishonest behaviour, they are thought to be crucial for promoting sustainable lifestyles and increasing consumer knowledge of environmental issues. Influencers from a variety of fields utilize text and images (photos and photographs) or multimedia content to communicate their message. Due to its versatility and relative ease of creation and deployment, these messages may increasingly contain AI-generated material, such as AI-generated pictures and multimedia (Narayanan, 2024).

Virtual Influencer on social media is a relatively new phenomenon that has gained many followers since 2018 (Moustakas et al., 2020). VIs are computer-generated imagery (CGI) or artificial intelligence (AI) based computer avatars with form and behavioural realism, trying to display real expressions (Sands et al., 2022). Few studies have empirically evaluated VIs' persuasive tactics and results, despite their growing popularity (Moustakas et al. 2020). Using case studies, exploratory research looked at the ethical issues surrounding VIs' inauthenticity and @lilmiquela, a VI with millions of followers who specializes in beauty, fashion, and lifestyle (Lou et al. 2023). Greenwashing is a necessary topic to investigate for this research paper since recent studies in the literature have shown that companies occasionally provide questionable environmental information to the public in an effort to outperform their rivals (Tomassi et al., 2024). The term "greenwashing" describes how customers believe a company is not doing enough or any environmental work compared to what it claims to be doing. Previously, greenwashing was used as an antecedent and consequence in different settings (Fang, 2024). Only a few researchers have looked at the connection between green authenticity perception and green buying decisions, despite the significance of green authenticity perception. The diverse literature of previous scholars discussed other forms of authenticity. For example, a study to evaluate influencer authenticity and purchasing decisions was carried out by Hasan et al 2024. The study's conclusions demonstrate that consumers' decisions to buy are strongly influenced by the legitimacy of influencers. This study is to evaluate the impact of green social media influence in order to close the gaps in the body of existing literature.

## II. RESEARCH AIM

The present paper attempts to evaluate the effects of artificial intelligence integration in green influencer marketing and document opportunities, challenges, and risks faced during its implementation. The current standing of AI in green influencer marketing and its effect on perceived authenticity and trust are synthesized through a literature review supported by primary research.

In particular, the paper addresses a series of questions:

- The dynamics between AI-enhanced content and trust among audiences with all naturally associated potential biases and authenticity
- It examines the results of random sampling to determine the follower's trust.
- Recommendations for merging AI's optimization capabilities with honest communication of sustainability values and actual audience engagement.

This paper explores the impact of AI on green influencer marketing and attempts to provide a deeper understanding of the virtual influencer phenomenon by contributing to filling the gap in the AI influencer literature. The impact of deploying generative AI content in messages shared by green influencers is the focus of our research. Given research showing that influencers who employ Gen-AI are viewed as inauthentic, this subject becomes crucial. For example, Guo and Wang (2024) show that influencers' usage of AI-based photo-editing software lowers customer engagement. Similarly, Brüns and Meißner (2024) demonstrate that influencers' content creation automated by AI, reduces authenticity.

## III. LITERATURE REVIEW

### *Influencer Marketing*

Over the past few years, The popularity of social media influencers (SMIs) has been growing exponentially, making influencer marketing (IM) prevalent in firm strategies (Vrontis et al, 2021). The popularity of these influencers incited advertisers to include them as a new marketing communication tool, also referred to as influencer marketing, in their marketing strategy (De Veirman et al, 2019). A compelling argument for why a business should use influencer marketing as a marketing tool is that influencers and readers have a built-in level of trust that is practically impossible for a brand to develop with the consumer on its own. Influencer marketing is growing tremendously, in a report by Fashion and Beauty Monitor in association with Econsultancy (2016, 3) "A healthy majority of survey respondents, 57%, say they already have an Influencer Marketing programme underway. Influencer marketing currently accounts for between 30% and 75% of a quarter's marketing spend. (Veissi ,2017). Influencer marketing is still a good option for marketers who are prepared to think creatively and cultivate relationships with their target audience, despite being a relatively new tactic (Kádeková & Holienčinová, 2018).

### *Green Influencers Marketing*

Green influencers (or: "greenfluencers") communicate about and promote an ecologically sustainable way of life (Pittman & Abell, 2021).

### *AI in Influencer Marketing*

AI has transformed influencer marketing by automating content creation, audience segmentation, and engagement. AI-driven tools such as ChatGPT and

Jasper AI allow influencers to generate high-quality, data-driven content at scale. Electronics like natural language processing and machine learning algorithms can help trades pick the right influencers, confirm their material is optimised, and measure how well their campaigns are achieved (Allal-Chérif 2024). Social media influencers have risen in prominence – the virtual artificial intelligence (AI) influencer (Leighton, 2019; Thomas and Fowler, 2021). An AI influencer can have a sizeable social network of followers and can be regarded as “a trusted taste-maker in one or several niches” (de Veirman et al., 2017, p. 798). AI is now being used to automatically write and respond to messages (Liu, 2019), effectively aiding brands in managing their social media accounts(Liu, 2019). Due to their apparent lower cost and less risk of being embroiled in a scandal, brands may find AI influencers appealing (Thomas and Fowler, 2021). Nevertheless, there is little actual research on how customers react to AI influencers, despite the possible benefits of working with one. As a result, little is known about how and why consumers could respond differently to AI influencers, or how marketers might best use them (Sands et al 2022). Given human influencers have a physical presence and can directly address followers in their posts, this creates a certain closeness with followers, often seeing and trusting them as peers (Erz and Christensen, 2018; Gannon and

Prothero, 2018). Therefore, it is anticipated that AI influencers will display social distance perceptions more like those of robots in human-robot interactions, whereas human influencers will be seen as less socially distant (Sands et al 2022).

**IV. METHODOLOGY**

**Research Design**

This is basically a social research study employing a quantitative method in which subjects are selected randomly. A structured questionnaire sent through the internet was distributed to social media users who follow green influencers on Instagram and YouTube. The questionnaire contained Yes/No/Maybe-type questions related to perceptions about AI-generated content, authenticity, and trust.

**Data Collection**

Data was collected from 50 randomly selected respondents through an online survey who were between the age of 18-25. The survey aimed to gauge consumer opinions on AI's impact on green influencer marketing.

The table below shows the percentage of different responses for the 12 questions which were asked.

Sr No	Questions Asked	Yes	No	Maybe
1	Do you follow green influencers who promote sustainability and eco-friendly products?	63.30%	14.30%	22.40%
2	Have you noticed an increase in AI-generated content from influencers in recent years?	95.90%	0	4.20%
3	Do you believe green influencers using AI tools risk losing their authenticity?	44.90%	24.50%	30.60%
4	Does AI-generated content make you skeptical about the influencer’s true commitment to sustainability?	53.10%	20.40%	26.50%
5	Do you trust product recommendations more when influencers personally review them instead of using AI-generated scripts?	69.40%	14.30%	16.30%
6	Would you trust an influencer more if they disclosed their use of AI in content creation?	44.90%	28.60%	26.50%
7	Do you think AI-generated sustainability messages feel less personal than human-created ones?	71.40%	14.30%	14.30%
8	If an influencer uses AI for engagement (e.g., automated replies, chatbots), would you feel less connected to them?	55.10%	16,3%	28.60%
9	Can AI-generated content be as impactful as real-life experiences shared by influencers?	20.40%	55.10%	24.50%
10	Would you support brands that collaborate with AI-driven influencers for sustainability campaigns?	28.60%	20.40%	51%
11	Would you stop following an influencer if you found out most of their content was AI-generated?	32.70%	38.80%	28.60%
12	If two influencers shared the same sustainability message, would you trust the one with human-created content more ?	74.30%	2.90%	22.90%

## V. RESULTS AND DISCUSSION

### 1. Consumer Awareness of AI in Green Influencer Marketing

The survey indicates a strong awareness of AI-generated content in sustainability-driven influencer marketing.

- 63.3% of respondents are following green influencers who support sustainability and environmental-friendly products.
- 95.9% have seen more AI-produced content from influencers in the last few years.

They indicate that content produced using artificial intelligence is gradually becoming an epidemic, and thus it is imperative to know how the audience looks at, and interacts with, such content.

### 2. Perceived Authenticity and Trust Issues

One of the biggest issues raised by the survey is the loss of authenticity when influencers employ AI-generated content.

- 44.9% are of the opinion that green influencers employing AI tools stand to lose their authenticity.
- 53.1% are doubtful about an influencer's genuine commitment to sustainability if AI-generated content is employed.
- 71.4% concur that AI-generated sustainability messages are less personal compared to human-generated ones.
- 55.1% would feel less connected to an influencer who employs AI for interaction, like automated responses or chatbots.

These answers point out the key role of the human touch in influencer marketing. Fans prefer content that is perceived as authentic, and AI-based automation could reduce the emotional and personal element of sustainability campaigning.

### 3. Preference for Human-Created Content

Trust is an important factor in the way audiences interpret influencer recommendations, with strong preference for human-generated content as opposed to AI-generated content.

- 69.4% are more likely to trust product recommendations when they are reviewed personally by influencers compared to AI-generated scripts.
- 74.3% would be more likely to trust an influencer if they posted human-made sustainability messages rather than AI-made ones.
- Just 20.4% agree that AI-driven content can be as effective as actual experiences expressed by influencers.

These results indicate that although AI can be used to create content, it does not have the credibility and relatability that are gained through firsthand experiences. Consumers find real-life experiences and personal involvement more convincing and credible.

### 4. Transparency and AI Acceptance

While there are some consumers that enjoy openness of AI use, disclosure alone never totally alleviates trust issues.

- 44.9% would be more likely to trust an influencer if they revealed that they use AI to create content.
- 28.6% would be in favor of brands that partner with AI-influencers for sustainability initiatives.
- 32.7% would unfollow an influencer if they discovered they produced most of their content with the aid of AI, and 38.8% didn't care.

Even with transparency, such findings imply that audiences will continue to gravitate toward material driven more by people. The participation of AI is usually welcomed only when it assists but not takes over personal narration.

### 5. Impact on Brand Collaborations and Engagement

- The potential influence of AI-powered influencers on brand engagement and trust is divided.
- 51% of the respondents were not sure if they would support brands working with AI-influencers, reflecting a split in consumer opinion.
- If two influencers delivered the same sustainability message, 74.3% would believe the human-created one more than the AI.

This suggests that while AI tools can make things more efficient, they are not yet mainstream as a content creation strategy on their own in sustainability marketing. Consumers value personal interaction and genuineness over convenience.

These findings emphasize the manipulation of balance between the beliefs in the reality of natural storytelling and AI understanding in green influencer marketing. The use of AI can still help with the optimization and scaling of the content but, if taken to extremes, the latter could lead to loss of trust and audience engagement. These should involve AI-powered and yet maintain direct engagement and nice storytelling in the formulation of hybrid strategies.

## VI. CONCLUSION

This shows the increased emergence of AI-generated content in influencer marketing, especially in the sustainability sector. While findings suggest the efficiency of AI tools, they also raise authenticity and trust issues. In particular, vast audiences see AI-generated sustainability content as less personalized and less persuasive than when it is produced by human creators. Also, the preference for influencers who personally produce their content shows that audience engagement is very closely tied to authenticity and legitimate lived experience.

With the growth of the quest involving AI in digital marketing, influencers and brands should aim to create a fine balance between automated information and a human touch. Transparency on AI utility, complemented by sincere engagements, deserves the

trust of the community behind sustainability. Future research ought to investigate long-term perceptions of audiences on ethical considerations and the evolving role of AI in influencer marketing. With this understanding, influencers and marketers would be equipped to optimize their approach toward their audience's expectations in a responsible manner with AI.

So, as linearity carves out the stone, the action of AI and authenticity in green influencer marketing will continuously remain transitional. It will be all about keeping that rare balance between a tech-nosed bent and ever-losing out on human needs.

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