Volume 9, Issue 8, August – 2024 International Journal of Innovative Science and Research Technology
ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24AUG268

The Influence of Blockchain Technology on Digital Advertising Practices

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Abstract:- Blockchain technology, widely recognized for its impact on the financial industry, is now revolutionising digital advertising practices. This paper delves into the ways blockchain technology improves transparency, reduces fraud, and enhances data security in digital advertising. By conducting a thorough analysis of existing research and real-life examples, we evaluate the influence of blockchain technology on different parties involved, such as advertisers, publishers, and consumers. Blockchain technology in advertising and marketing could provide a straightforward solution to the issue of high costs and lack of transparency, thanks to its decentralised ledger system that allows for cost-saving and real-time data aggregation. The results indicate that blockchain has the potential to bring about substantial advantages, but it also encounters obstacles that need to be overcome in order to fully harness its capabilities within the digital advertising landscape.

Keywords:- *Online Advertising, Technology and Innovations, Blockchain Technology, Organisational Activity System.*

I. INTRODUCTION

The digital advertising industry is constantly changing and growing, but it also faces many problems like fraud, lack of transparency, and worries about people's personal information. Blockchain technology, with its decentralised, transparent, and secure characteristics, offers a promising solution to these problems. This paper investigates the impact of blockchain technology on digital advertising practices, offering an overview of its potential advantages and obstacles. Blockchain is a technology that enables data to be securely stored across a network of computers, ensuring transparency and preventing unauthorised modifications. Each transaction is documented in a block and connected to the previous one, forming a chain of blocks. Some important characteristics of blockchain technology are decentralisation, immutability, and transparency. Blockchain technology (BCT) offers potential solutions to the existing challenges in digital advertising, including data security and trust, incentivizing user engagement, and ensuring secure transactions among all participants in the ecosystem (yun and strycharz 2022).

II. MANAGING DIGITAL ADVERTISING AND MARKETING DATA WITH BLOCKCHAIN

Digital advertising and marketing have become more data-driven, utilising extensive consumer data to develop targeted and personalised campaigns. Nevertheless, the use of data presents various challenges, such as data privacy, security, and transparency. Blockchain technology, with its distinctive features, offers an innovative approach to tackle these challenges. This paper explores the potential applications of blockchain technology in the realm of digital advertising and marketing, presenting solutions that improve trust, security, and efficiency.

A. Data Privacy Concerns

The gathering and utilisation of consumer data in digital advertising and marketing have sparked substantial concerns regarding privacy. Laws like the general data protection regulation (gdpr) and the california consumer privacy act (ccpa) have been put in place to safeguard consumer privacy, compelling companies to implement more secure and transparent data handling procedures.

B. Lack of Transparency

The process of digital advertising involves multiple intermediaries, resulting in a lack of transparency. Marketers frequently encounter difficulties in monitoring the movement of their data and allocating their budget, leading to inefficiencies and a lack of trust.

C. Fraud and Security Issues

Fraud, such as ad fraud and data breaches, is a significant problem in digital advertising. Engaging in fraudulent activities not only results in monetary losses but also erodes the trust and credibility of the advertising ecosystem.

D. The Current State of Digital Advertising

➢ *Challenges in Digital Advertising*

- **Fraud**: Digital advertising and marketing have become more data-driven, utilizing extensive consumer data to develop targeted and personalized campaigns.
- **Lack of Transparency**: Nevertheless, the use of data presents various challenges, such as data privacy, security, and transparency.

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- **Data Privacy**: Blockchain technology, with its distinctive features, offers an innovative approach to tackle these challenges.

E. The Influence of Blockchain on Digital Advertising

➢ *Enhancing Transparency*

This paper explores the potential applications of blockchain technology in the realm of digital advertising and marketing, presenting solutions that improve trust, security, and efficiency.

➢ *Reducing Fraud*

The gathering and utilisation of consumer data in digital advertising and marketing have sparked substantial concerns regarding privacy. Laws like the general data protection regulation (gdpr) and the california consumer privacy act (ccpa) have been put in place to safeguard consumer privacy, compelling companies to implement more secure and transparent data handling procedures.

➢ *Improving Data Security and Privacy*

The process of digital advertising involves multiple intermediaries, resulting in a lack of transparency. Marketers frequently encounter difficulties in monitoring the movement of their data and allocating their budget, leading to inefficiencies and a lack of trust. Fraud, such as ad fraud and data breaches, is a significant problem in digital advertising. Engaging in fraudulent activities not only results in monetary losses but also erodes the trust and credibility of the advertising ecosystem.

F. Challenges and Limitations

➢ *Blockchain Technology Presents a Number of Obstacles in Addition to its Many Advantages for Digital Advertising*

- **Scalability:** The high volume of transactions in digital advertising may be too much for blockchain networks to handle due to scalability problems.
- **Adoption:** It can be expensive and time-consuming to make the necessary changes to the current infrastructure and procedures in order to adopt blockchain technology in digital advertising.
- **Regulation:** The adoption of blockchain technology in digital advertising may be hampered by concerns about compliance with the still-evolving regulatory landscape.

III. FUTURE PROSPECTS

Blockchain's future in digital advertising appears bright, as ongoing advancements are being made to address existing issues. Wider adoption is probably going to be fueled by innovations in blockchain scalability, interoperability, and user-friendly interfaces. Moreover, more publishers and advertisers might be open to adopting blockchain technology as the legal framework for it becomes more definite.

IV. CONCLUSION

Blockchain technology's ability to increase transparency, lower fraud, and improve data security could completely transform digital advertising. Although there are obstacles to overcome, the advantages it provides make it an appealing answer to the problems facing the industry right now. Blockchain technology is predicted to have a greater impact on digital advertising strategies as it develops, creating an ecosystem for advertising that is more efficient, safe, and transparent.

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