



Adoption of Emerging Technologies and Its Influence on Modern Digital Marketing Strategies”

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Abstract

Businesses across industries are adopting technologies such as Artificial Intelligence, Machine Learning, Big Data Analytics, Augmented Reality, Virtual Reality, Blockchain, Chatbots, the Internet of Things, and Marketing Automation in their marketing operations. These tools have shifted digital marketing away from mass-broadcast approaches toward strategies built around data, personalization, and more direct customer interaction.

This study examines how businesses are adopting these technologies and what effect that adoption has on their marketing strategies. It looks at which technologies are in common use, how far adoption has progressed across different industries, and how these tools affect customer engagement, decision-making, operational efficiency, and campaign performance. The study also identifies the opportunities and obstacles organizations encounter during implementation.

Data was collected through surveys (primary) and from academic journals, industry reports, articles, and books (secondary).

Keywords: Emerging Technologies, Digital Marketing, Artificial Intelligence, Big Data Analytics, Marketing Automation, Customer Engagement, Blockchain, Augmented Reality, Virtual Reality.

Introduction

Digital marketing has changed a lot lately, mostly because of all these new technologies popping up everywhere. You know, the old ways like TV ads or newspaper stuff are fading out, and now its more about smart, personalized things online that use data to target people better. Technologies like AI, machine learning, big data, AR, VR, blockchain, IoT, chatbots, and automation tools are kind of taking over strategies in marketing these days.

In this competitive world businesses are in, companies want ways to grab customers attention and keep them coming back. With these techs, its easier to figure out what customers like or how they shop, all from real time data. Marketers can then send ads that feel made just for you, or run campaigns that hit



the right spots, which I think boosts satisfaction and loyalty to the brand. That part seems pretty straightforward.

Statement of the problem

Emerging technologies are growing so fast, and that is really shaking up how digital marketing works these days. Businesses keep turning to stuff like AI and big data analytics, or even AR and VR tools, along with automation, just to make customer interactions better and get more out of their marketing efforts. It seems like not every organization gets how these things actually change their strategies or help with engaging customers, though.

Scope of the Study

The study covers how emerging technologies are being used in digital marketing across industries. The technologies examined include AI, Machine Learning, Big Data Analytics, AR/VR, Blockchain, Chatbots, and Marketing Automation.

1. It also looks at how far businesses have gone in adopting these tools, how adoption affects customer engagement, what it means for marketing strategy, and whether it translates into better performance.
2. The research draws on two sources: surveys completed by respondents, and secondary material from academic journals, articles, websites, and industry reports.

Research gap: Most existing studies discuss emerging technologies in marketing at a surface level. Fewer examine how far businesses have actually gone in adopting them, what that adoption does to marketing strategy, or whether it produces real improvements in customer engagement and performance. This study addresses that gap directly — focusing on adoption patterns and marketing impact together, rather than treating them separately.

Objectives of the Study

To find out which new technologies are used in digital marketing.

To know how much businesses are using these new technologies.

To understand how these technologies change marketing strategies.

To study how new technologies improve customer engagement and marketing results.

Review of Literature:

1. Philip Kotler (2017)

Kotler emphasized that digital transformation has reshaped marketing practices by integrating advanced technologies into customer relationship management and communication processes. He highlighted the shift from traditional marketing to customer-centric and data-driven marketing approaches.

2. Dave Chaffey and Fiona Ellis-Chadwick (2019)

Their research on digital marketing strategies found that businesses increasingly use artificial intelligence, analytics, and automation tools to improve customer targeting and campaign effectiveness. The study concluded that technology adoption enhances marketing efficiency and customer engagement.

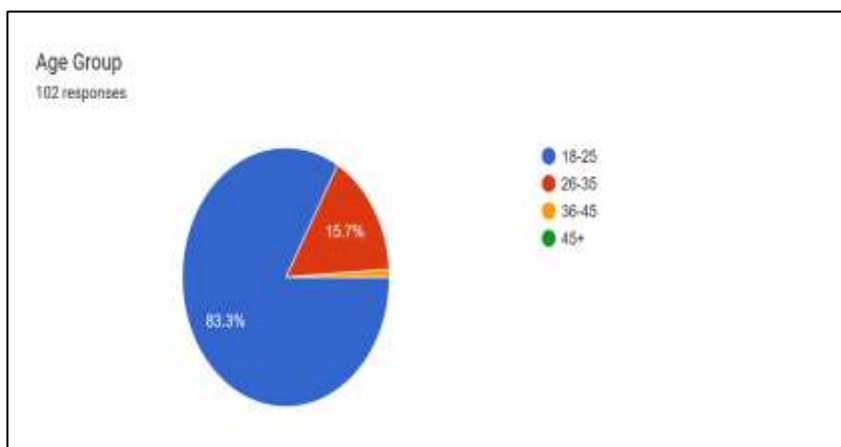
Research Methodology

1. The sample size is limited and may not fully represent businesses across all industries.
2. Time constraints kept the data collection window narrower than ideal.
3. Some respondents may have answered based on perception rather than direct experience, which could introduce bias.
4. The study leans heavily on survey responses and secondary sources — deeper methods like interviews were outside its scope.
5. Given how quickly technology evolves, some findings may lose relevance sooner than others

Data Presentation

Distribution of Respondents by Age Group

Age Group	Frequency	Percentage
18-25 Years	72	70.60%
26-35 Years	20	19.60%
36-45 Years	8	7.80%
Above 45 Years	2	2.00%
Total	102	100%

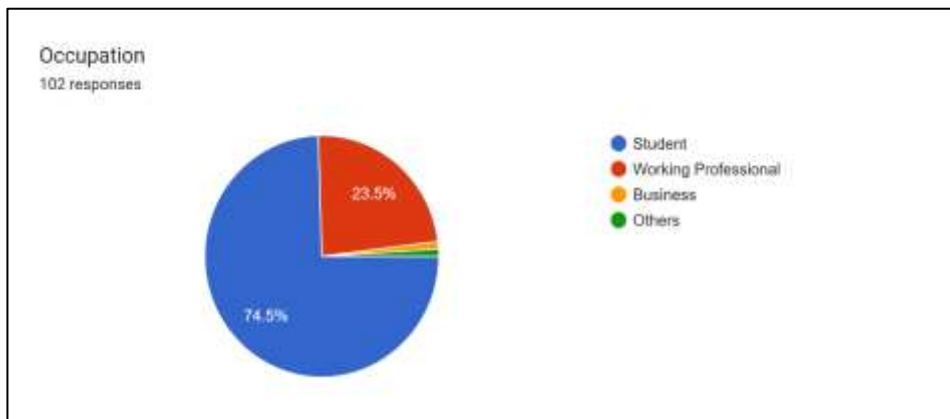


Interpretation

The majority of respondents (70.6%) belong to the age group of 18–25 years, indicating that young adults are highly exposed to digital marketing technologies and emerging technological trends.

Distribution of Respondents by Occupation

Occupation	Frequency	Percentage
Student	64	62.70%
Working Professional	24	23.50%
Business	10	9.80%
Others	4	3.90%
Total	102	100%

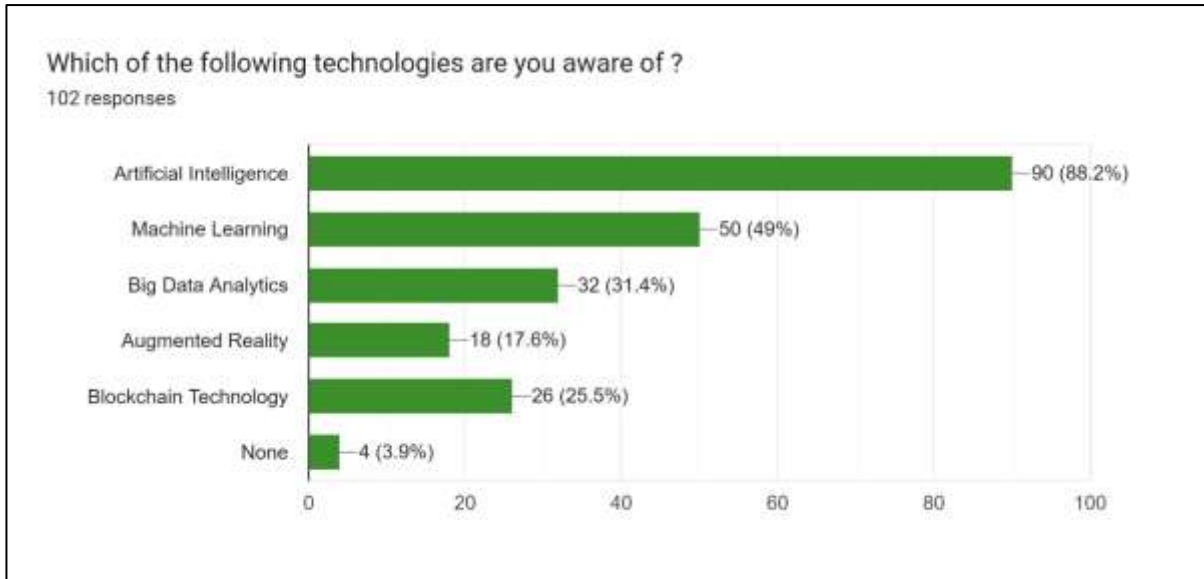


Interpretation

A significant majority (87.3%) are familiar with digital marketing, demonstrating high awareness of digital marketing concepts among respondents.

Awareness of Emerging Technologies

Technology	Frequency	Percentage
Artificial Intelligence	90	88.20%
Machine Learning	82	80.40%
Big Data Analytics	76	74.50%
Augmented Reality	70	68.60%
Blockchain Technology	52	51.00%



Interpretation

Artificial Intelligence is the most recognized technology, followed by Machine Learning and Big Data Analytics. Blockchain technology shows comparatively lower awareness among respondents.

Challenges Faced in Technology Adoption

Challenge	Frequency	Percentage
Data Privacy Concerns	34	33.30%
High Cost	27	26.50%
Lack of Knowledge	23	22.50%
Technical Issues	18	17.70%
Total	102	100.00%

Findings

- Artificial Intelligence (AI) is the most widely adopted technology in digital marketing, helping businesses automate customer service, personalize content, and analyze consumer behavior.
- Machine Learning (ML) is increasingly used to predict customer preferences, improve targeting, and optimize advertising campaigns.
- Big Data Analytics enables organizations to collect and analyze large volumes of customer data, resulting in better decision-making and more effective marketing strategies.

Conclusion

The study concludes that emerging technologies have become a crucial component of modern digital marketing strategies. Technologies such as Artificial Intelligence, Machine Learning, Big Data Analytics, Chatbots, Automation Tools, Augmented Reality, and Virtual Reality are transforming the way businesses interact with customers and conduct marketing activities. These technologies enable organizations to



deliver personalized experiences, improve customer engagement, enhance campaign effectiveness, and achieve better marketing outcomes.

Therefore, organizations should continue embracing emerging technologies while addressing challenges related to cost, skills, and data privacy. Successful integration of these technologies will play a significant role in shaping the future of digital marketing and ensuring sustainable business growth in the digital era.

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