

Artificial Intelligence and Augmented Reality: A Paradigm shift in Marketing

Vaishali R. Bendre*

ABSTRACT

This article discusses how artificial intelligence and augmented reality can be applied to marketing. The impacts of deep learning, machine learning, and neural networks can change the way marketers pursue their customers. The future of marketing is yet to be explored by advancements in Artificial Intelligence and so is the purpose of this research. The decision-making, predictive analysis of customer future behavior, sales process, and sales automation (order entry & new product announcement, etc.) are some of the benefits of using AI in businesses. This article is an exploratory study on this novel and yet-to-be-explored field of research that adds to the body of knowledge and tries to link Artificial Intelligence and its application in marketing. The author has reviewed the available literature and given an overview of the present study. The research attempts to elucidate AI and its application in marketing. The collaboration of AI with the marketing landscape will eventually enable marketers to harness their potential and aid them in building customer relations by involving in customer engagement. Augmented Reality (AR) and Virtual Reality (VR) technology will provide a whole new customer experience and redefine the marketing paradigm. The article unfolds usage of Artificial Intelligence and Augmented reality in marketing and also explains the benefits and challenges associated with it.

Keywords: Social Media; Consumer Insights; Consumer Experience; Digital Marketing; Customer Engagement; Brand Loyalty

INTRODUCTION

The wonders of science and technology are going to skyrocket speed in today's generation. Every day new machinery and new gadgets are being introduced in the markets. The fruits of technology can be enjoyed by any sector as in business. Many products are produced, marketed, and sold in the market involving these technologies. The introduction of digital marketing strategies has made business houses earn bounty profits. Businessmen use digital marketing tools and strategies like SEO (Search Engine Optimisation), Social media, and other platforms which act as catalysts in improving their financial performance.

In earlier days, the machines were restricted to work as per their algorithm i.e. in a proper and specific manner only. They did not perform any task beyond their capacity. Because they did not have brains like humans do. Their actions were limited. But, Artificial intelligence is a revolution in this regard. With the help of artificial intelligence, machines also can work like humans. They have the special power of thinking, decision-making, and reasoning ability. Isn't it a miracle? Science and technology have no boundaries and it can be applied in any sector. Common people are pretty much familiar with AI as shown in movies like "Her" and the Indian movie "Robot". AI can do much more than that. The latest advancements in AI includes self-driving cars, airplanes flying without pilots, skype calls etc (Makridakis, 2017). This paper answers the paradigm shifts in marketing by application of AI and Augmented Reality. The benefits of AI (Artificial Intelligence) and AR (Augmented Reality) can be leveraged to harness the marketing paradigm. This particular research adopts the descriptive approach to connect the bridge between AI and AR with the marketing sector. Many entrepreneurs are new to this technology which is why there is a need to acquaint them with how AI can be integrated with business activities to harness business proceedings. The article is divided into four sections. The first section discusses the Introduction, second includes the Literature Review, third section includes Methodology, fourth section includes the Results and finally the fifth section is all about conclusion.

LITERATURE REVIEW

Artificial intelligence is the ability of machines or computers to pursue the environment and act accordingly. The intelligence owned by the machines to operate on their own as a response to the prevailing environment is 'artificial intelligence'.

Table 1: List of studies on Artificial intelligence

Authors	Title of the article	Key takeaways	Methodology used
Makridakis, 2017	The forthcoming Artificial Intelligence (AI) revolution: Its impact on society and firms	The paper discusses about the evolution of artificial intelligence and its potential ability to overtake the human intelligence in the future. The paper also highlights how American firms are investing hefty amount on AI research and therefore remain on forefront in AI race. Along with AI revolutions, the firms must consider success factors: Innovative Breakthroughs, Technologies and their usage, Managing people, Growth by Acquisition. By 2037, the firms which are adapting to the emerging technologies and innovation at regular times will sustain in the global market and hence exploit the global opportunities at the same time.	Descriptive
Syam & Sharma, 2018	Waiting for a sales renaissance in the fourth industrial revolution: Machine learning and artificial intelligence in sales research and practice	Decision-making will shift from humans to machines by deploying AI in business. The paper also proposes the future scope of AI sales.	Qualitative expert based

De Bruyn et al., 2020	Artificial Intelligence and Marketing: Pitfalls and Opportunities	Discusses the opportunities and challenges of AI	Exploratory study
Huang & Rust, 2020	A strategic framework for artificial intelligence in marketing	The use of 3 AI intelligences (i.e. mechanical AI, thinking AI, and feeling AI) for leveraging marketing research, marketing strategy, and marketing actions.	Descriptive
Verma et al., 2021	Artificial intelligence in marketing: Systematic review and future research direction	Explained the use of AI in the 4 P's of marketing i.e. strategy and planning, product management, pricing management, place management, and promotion management.	Bibliometric analysis
Vlačić et al., 2021	The evolving role of artificial intelligence in marketing: A review and research agenda	Leveraging the enhancement of CRM using AI and a better understanding of consumer demographics and psychographics.	Content analysis based hybrid- narrative systematic review approach
Chintalapati & Pandey, 2021	Artificial intelligence in marketing: A systematic literature review	Using AI algorithms will result in acquiring greater value for marketers. The study is extended over five functional themes including, content marketing, experiential marketing, integrated digital marketing, marketing operations, and market research.	Systematic Literature Review of 57 articles
Shaik, 2023	Impact of artificial intelligence on marketing	Competitive pressure and customer satisfaction are the main reasons to implement AI in business.	Semi-structured interviews with 15 marketing professionals from different organizations in Bangalore City.
Nalbant & Aydin, 2023	The Significance of Artificial Intelligence in the Realms of Marketing, Advertising, and Branding inside the Metaverse	Importance of AI and VR in Metaverse. Explains Strengths, Weaknesses, Opportunities, and Threats associated with the metaverse.	SWOT analysis in the metaverse domain
Nalbant & Aydin, 2023	Development and Transformation in Digital Marketing and Branding with Artificial Intelligence and Digital Technologies Dynamics in the Metaverse Universe	Importance of adopting Metaverse realm in business operations. Explain the chronology of the growth of the metaverse and its implementation in different fields.	Descriptive
Zainab Efe Egieya et al., 2023	The Role of Virtual and Augmented Reality in Modern Marketing: A Critical Review	Examines the role of Human resources in adoption of the AI and AR technologies. Addresses the opportunities and challenges in adopting FinTech solutions in the business arena.	Literature review
Durmuş Şenyapar, 2024	The Future of Marketing: The Transformative Power of Artificial Intelligence	The future of AI is promising in the context of marketing.	Qualitative descriptive approach for in-depth exploration

METHODOLOGY AND RESEARCH QUESTIONS

The methodology followed in this work is a descriptive approach for studying the concept of AI and VR and its implications in marketing. The author has attempted to bridge a connection between Artificial Intelligence and marketing. How has the marketing paradigm shifted from traditional to modern using advanced technology and what are the potential future opportunities available to the marketers? The paper also includes a case study on transformation due to the adoption of AI by Flipkart- a well-known and most widely used e-commerce site in India. This approach was adopted because of two reasons, viz., first, very little literature is available on this specific subject, and second, a descriptive approach can be beneficial to understand the potential advantage AI and AR carry in boosting marketing campaigns rather than generating and testing the hypothesis and theories. This paper adds to the body of existing literature.

Research questions:

- What is AI and AR?
- Can AI and AR be used in marketing campaigns to boost sales?
- What are the opportunities and threats involved in using AI & AR in the context of marketing?
- What is the future of AI and AR in the marketing paradigm?

RESULTS

Defining AI and AR: Legg & Hutter, (2007) has identified 71 definitions of “Intelligence” and considering all these have defined intelligence as the “Measure of an agent’s ability to achieve goals in a wide range of environments”. Artificial intelligence can be defined in different perspectives of its use. The most common definition prevailing in this context is “Artificial intelligence is getting computers to do the things which need human intelligence” (Cawsey, 1998). Intelligence demonstrated by machines is nothing but artificial intelligence. Based on their capabilities and functionalities, AI can be classified into types according to Geeks for Geeks (2020). Alexa, Siri, Google Assistant, Chat GPT, Google Gemini, etc are the most widely used weak or Narrow AI (weak simply depicted here in terms of “intelligence” it demonstrates) application tools. These tools make human work easy. Although machines can perform some of the complex tasks that man can do like face recognition, voice recognition, voice search, image search, etc. it is still constrained by performing some of the tasks associated psychologically, emotionally, cognitively, and intuitively. Robotics is one of the strongest forms of AI. Recently a robotic humanoid named ‘Sophia’, which is a type of Strong AI or AGI (Artificial General Intelligence) as stated (Wirth, 2018) was quite famous and could talk, walk, and give expressions just like humans. It is the first humanoid to have got citizenship. The other humanoids are Beomni 1.0, Ameca Robot, Toyota T-HR3, Nadine, Geminoid DK, Junko Chihira, Jia Jia, ATLAS Robot, Erica Robot by IRL, Pepper by SoftBank, Kime Robot (Gray, 2022).

With the help of these advanced technologies, firms can manage huge data and provide informative insights about their business happenings which will assist the marketing managers in decision-making that is data-driven or analytics-driven (Gupta *et al.*, 2020). Augmented reality on the other hand is the technology that combines the real world and computer-generated 3D content. It helps people experience technological transformation in the real-world environment. These disruptive developments in technological areas have changed the way today’s modern business operates (Gans, n.d.) The very concept of design thinking and customer-centricity approach (Vetterli *et al.*, 2016) will assist firms in integrating customers with innovation. The technological innovations like Artificial intelligence and Augmented reality will provide the users with a new and exquisite experience of shopping. AI so can perform laborious tasks such as data handling, customer database management, customer relationship management, social media posting, and others.

There is no doubt in the fact that artificial intelligence is going to take over the world in the future (Verma *et al.*, 2021), like finance, sales, customer relationships, human resource management, market research, etc. Other than this its application extends to other sectors like manufacturing, medicine, education, law, and e-commerce as well. Augmented reality is widely used and e-commerce customers are enjoying the benefits of these tech-savvy sites. The few examples to be quoted are the filters that are available on Instagram which can change the facial appearance of people like a pro. The very famous furniture brand IKEA is using this technology for shoppers to test and visualize products in their own space and make purchase decisions, similarly Netflix, and Pepsi (Yahoo Video Search. (n.d.b). & Forsey, 2022).

The marketing concepts are always evolving and AI is the buzz in this generation. The huge industries are embracing tech-savvy techniques for big data analytics, marketing research campaigns, and advertising campaigns. However, some of the companies still have a naive understanding of this buzz technology. There are still some questions that need to be answered. Whether AI can make decisions better than humans can when provided with the data? For example, Will a customer 'A' buy a particular product at Price 'X' (Wirth, 2018)? If the answer is 'Yes' then marketing research can cross boundaries. Advanced technologies like machine learning, deep learning, and neural networks can handle the data efficiently. Using the insights from past data, the firms can make the right decision at the right time. The advancement in technology has a futuristic model of marketing as explained by (Grandinetti, 2020).

How AI & AR are used in marketing by different firms across the globe: Artificial Intelligence and Augmented Reality have experienced a paradigm shift in marketing (Chintalapati & Pandey, 2021).

- **Market Automation:** AI is used by different industries to automate their marketing, sales, customer behavior, business models, etc. In this prevailing era, most companies have adopted futuristic technology which has the potential ability to drive the market crazy with computer-based "intelligence". (Syam & Sharma, 2018) In their article have explained how Support Vector Machine (SVM), Artificial Neural Networks (ANN), and Natural Language Processing (NLP) have potential applications in sales.
- **Virtual Trial Rooms:** Ralph and Lauren Stores in New York created Chaos in markets by launching the brand new touch screen mirror, allowing you to try new outfits, communicate with associates, and search for corresponding items without leaving the room. This technology was designed by Oak Labs (Strugat, 2015). Virtual 3D Sketch by Meta Quest Store allows people to sketch 3D animated pictures like vehicles, furniture, sneakers, etc. (Yahoo Video Search, n.d. a).
- **Personalized Advertising:** The very concept of Segmentation, Targeting, and Positioning (STP) is more intensified by Micro-segmentation and customers are provided with one-to-one personalized attention. AI-powered Augmented Reality can create personalized advertisements by making use of customer's data and delivering targeted messages. AI can be used to reach out to customers in real time and provide even more individualized services to customers. This will encourage customer retention and satisfaction at their best.
- **Storytelling:** It is a new way of blending reality with fiction. Many brands across the world use storytelling to convince people to create brand awareness. AI and AR-powered immersive storytelling can create brand-new experiences of storytelling and can create an emotional bond with the customers (ContentAiGen, n.d.).
- **AI Powered Stores:** One of the finest examples for this is the Amazon Go stores (YouTube, n.d.). The ideology behind this kind of shopping is that the customers need not wait for a long time in the queue waiting to get bills for check-out. Just grab the item and walk out of the store. This reduces the time consumed by customers for shopping.
- **Customer Relations:** Retailers like Amazon, 1-800-Flowers.com, etc. have already implemented AI by collecting information from social media and implementing innovations in retailing. AI also helps in customer profiling by creating the customer's demographic and psychographic mapping (Vlačić et al., 2021) which in turn can be used to create specific promotional activities for specific customers.
- **Accelerating Sales:** AI and metaverse have the potential ability to increase sales in the fashion industry by analyzing customer trends, emotions, behavior, and attitudes (Nalbant & Aydin, 2023). Metaverse includes Blockchain, WEB3, and NFTs (Non-Fungible Tokens) which can integrate the physical world with the digital world.
- **Establishing Brand Identity in the Digital Realm:** The young generation (GenZ) is more fascinated by the innovative and futuristic experiences associated with brands. Many brands are investing in advanced technologies like the metaverse and creating their brand identities in the digital realm (Nalbant & Aydin, 2023).

AI and customer behavior: Davenport et al., (2019), in their research article have given the potential threat of adopting AI. Many previous studies have concluded that consumer behavior is unpredictable and can vary from time to time based on their needs and preferences. With the adoption of new technology, consumer expectations are set very high and are likely to be disappointed if those expectations are not met (Groom et al., 2011). The inability of machines to understand the emotional attachments of customers to their culture, feelings, traditions, geographic conditions, and spiritual well-being has become a drawback for successfully delivering consumer expectations and satisfaction. AI runs on the framework of consumer's past behavior. It fails to satisfy the consumer if he wants to get out of his past trait of using a particular product which has caused potential damage to health physically or psychologically.

Example of AI being used by Flipkart in the Indian digital market: Flipkart is an E-commerce site leveraging marketing campaigns using AI. According to (Stories, 2024), it is an early adopter of technology and innovation in

India. So, it is enjoying the benefits and can stand out of the line. Mayur Datar, Chief data scientist at Flipkart, provides insight into the power of AI-driven marketing strategies and their impact on customer engagement and customer satisfaction. AI can create personalized recommendations of products for their customers which are tailored according to their personal choices. AI's ability to create predictive analytics done by time-series analysis of customer choices and preferences has enabled retailers to design and produce only those goods which are having potential demand in the market and store sufficient inventory stocks. This helps in reducing the dead stock and also using the available resources efficiently. AI chatbots can chat with customers in real-time and help retailers to know what the possible problems the customer may have and what are possible solutions that can be provided in real-time. This will enhance the customer shopping experience and help them connect with the firms instantly.

Not only these, but AI has enhanced operations like data handling, supply chain management, logistics, AI-driven Advertisements, etc. Furthermore, AI-driven systems reject transactions that are fraudulent and prevent the violation of the security of both customers as well as retailers. Let us know how. AI provides an alert signal to the customers if they are contacted by duplicate retailers which are having fake accounts or duplicate accounts. On the other hand, if any customer has purchased an expensive product like a smart phone and is returning the mimic version of the same by changing the seal which bears a resemblance to the original product then an AI-driven Scanner will identify such issues and determine whether the product exchanged is original or not.

As discussed above, AI turns out to be an integral part of the marketing decision-making process which provides an alert signal for users to take care of its ethical part as well as accuracy in providing the insights. To combat this issue, Flipkart regularly undertakes the tests of AI models and ensures adherence to its ethical use without any biases. In addition to this, Flipkart also takes into consideration following up the regulatory standards framed by the Government of India and worldwide to align the safety and security of using AI.

OPPORTUNITIES AND THREATS OF ARTIFICIAL INTELLIGENCE

Opportunities: The most common and known ability of artificial intelligence is that it can unleash the hidden patterns or trends in data by its unique ability to filter the raw data and provide its users the predictive analysis and insights without or with very little intervention of humans (De Bruyn et al., 2020). This is an opportunity for the marketing individuals to do this tedious task which requires a lot of human involvement and could consume a lot of time. The advancements and future developments in AI will deliberately enhance the business decision model, new product development, communication, pricing, sales management, advertising, mobile marketing strategies, and social media marketing strategies (Vlačić et al., 2021). The "Shipping-then-shopping" model demonstrated by (Davenport et al., 2019) is an exclusive experience for contemporary customers.

Threats: The danger associated with artificial intelligence is that they lack emotional intelligence. Meaning, they cannot identify and understand happiness or sadness while doing image recognition or analysis of sentiments in reviews (Vo et al., 2018), or voice analysis- an angry customer who is dissatisfied with the product and complaining *via* call. We humans can understand and recognize hundreds and thousands of emotions which can be either real or fake. Computers can be trained to recognize a particular pattern of identification of "smile", "angry" or "sad" faces but deliberately cannot pursue the complex psychology of human beings. This particular issue is identified as a "lack of common sense in machines" by (De Bruyn et al., 2020). This factor is highlighted in one of the famous Indian movies "Robot" featuring Superstar Rajinikanth acting in the role of "Robot named Chitti". When the scientist infused the emotions in that robot, it created chaos which can be a dangerous situation for humankind to handle. Another potential danger AI can be prone to is the depletion of human knowledge and skills. If AIs start handling the complex tasks which earlier needed "human intelligence" then, human being's ability to think and make decisions, and cognitive thinking skills will potentially deplete over some time. Apart from these threats, whenever finance or any other sensitive matters are preserved AI can out throw potential threats when cyber attacking happens. Personal and sensitive information can be hacked by using software that can violate security issues. Over relying on AIs for customer engagement may lead to customer disengagement i.e. customers start feeling annoyed when they realize that they are conversing with the AI chat bots (Huang & Rust, 2020).

FUTURE OF AI AND AR

Any technology you may consider, there is a scope for its development at every stage. So is the case with AI and VR. Virtual reality is ever-evolving. The future development in VR can potentially be improved in terms of the quality of images and performance. VR can be used in many fields like medicine, architecture, and the automotive

industry. VR along with Mixed Reality (MR) can open platforms for further developments in this area. In addition to this, the developers of this technology should ensure the standards and safety of its users. In the marketing context, AI-driven marketing is likely to provide even more sophisticated and real-like experiences to the customers. Hyper-personalization, accuracy in prediction, advancements in data analytics, voice assistance, search assistance etc (Durmuş Şenyapar, 2024).

The integration of AI with VR, AR, Block chain, Web3, and NFTs (Non- Fungible Tokens) is called Metaverse. Metaverse can be identified as a virtual digital realm, which can allow customers to interact between the physical world with the digital world. Metaverse can usher companies to undertake marketing campaigns like Advertising, Branding, Metaverse Marketing, etc., and enable target customers (specifically GENZ) to provide whole new marketing experiences.

CONCLUSION

From the above study, it is implied that AI has a scope for further development and it can undoubtedly assist marketers to understand consumer behavior based on their past behavior. Although AI is a new and expensive technology to be installed. Augmented reality on the other hand is a powerful tool that can be used to create the virtual elements to be superimposed in the real world giving a whole new experience to the customers. Augmented reality can be used as a simulator to try on the products and look at the appearance or experience the product and its performance without actually buying it. VR(Virtual Reality) can also be used for training employees without actually working in the real field. These technologies have the potential ability to diminish the work that could only be possible by humans. It can bring about industrial revolution and digital revolution combined together in the near future. It encompasses economic growth and builds a strong customer base by acquiring their loyalty by delivering value and satisfaction backed by innovative customer experiences and engagement.

REFERENCES

- Cawsey, A. (1998). *The Essence of Artificial Intelligence*. Pearson.
- Chintalapati, S., & Pandey, S. K. (2021). Artificial intelligence in marketing: A systematic literature review. *International Journal of Market Research*, 64(1), 38–68.
- ContentAiGen. (n.d.). *The art of storytelling: Immersive narratives in augmented reality*. ContentAiGen. Retrieved July 5, 2025, from <https://contentaigen.com/The-Art-of-Storytelling-Immersive-Narratives-in-Augmented-Reality>.
- Davenport, T., Guha, A., Grewal, D., & Bressgott, T. (2019). How artificial intelligence will change the future of marketing. *Journal of the Academy of Marketing Science*, 48(1), 24–42.
- De Bruyn, A., Viswanathan, V., Beh, Y. S., Brock, J. K.-U., & Von Wangenheim, F. (2020). Artificial intelligence and marketing: Pitfalls and opportunities. *Journal of Interactive Marketing*, 51(1), 91–105. <https://doi.org/10.1016/j.intmar.2020.04.007>
- Durmuş Şenyapar, H. N. (2024). The future of marketing: The transformative power of artificial intelligence. *International Journal of Management and Administration*, 8(15), 1–19. <https://doi.org/10.29064/ijma.1412272>
- Forsey, C. (2022, October 18). 8 innovative & inspiring examples of augmented reality in marketing. *HubSpot*. <https://blog.hubspot.com/marketing/augmented-reality-examples>
- Gans, J. S. (n.d.). Keep calm and manage disruption. *MIT Sloan Management Review*. Retrieved December 13, 2024, from <https://sloanreview.mit.edu/article/keep-calm-and-manage-disruption/>
- GeeksforGeeks. (2020, August 23). Types of artificial intelligence (AI). *GeeksforGeeks*.

- Grandinetti, R. (2020). How artificial intelligence can change the core of marketing theory. *Innovative Marketing*, 16(2), 91–103.
- Gravity Sketch. (n.d.). Gravity sketch. In *Gravity Sketch*. Retrieved December 18, 2024, from <https://www.meta.com/experiences/gravity-sketch/1587090851394426/>
- Gray, C. (2022, August 1). 12 most advanced AI humanoid robots shaping the future. *Tech Research Online*. <https://techresearchonline.com/blog/ai-humanoid-robots/>
- Groom, V., Srinivasan, V., Bethel, C. L., Murphy, R., Dole, L., & Nass, C. (2011). Responses to robot social roles and social role framing. *2011 International Conference on Collaboration Technologies and Systems (CTS)*, 194–203. <https://doi.org/10.1109/cts.2011.5928687>
- Gupta, S., Leszkiewicz, A., Kumar, V., Bijmolt, T., & Potapov, D. (2020). Digital analytics: Modeling for insights and new methods. *Journal of Interactive Marketing*, 51(1), 26–43. <https://doi.org/10.1016/j.intmar.2020.04.003>
- Huang, M.-H., & Rust, R. T. (2020). A strategic framework for artificial intelligence in marketing. *Journal of the Academy of Marketing Science*, 49(1), 30–50. <https://doi.org/10.1007/s11747-020-00749-9>.
- IBM. (n.d.). *2024 technology leader study: 6 blind spots tech leaders must reveal*. IBM Institute for Business Value. Retrieved April 19, 2025, from <https://www.ibm.com/thought-leadership/institute-business-value/en-us/c-suite-study/cxo>
- Kreutzer, R. T., & Sirrenberg, M. (2019). *Understanding artificial intelligence: Fundamentals, use cases and methods for a corporate AI journey*. Springer Nature.
- Legg, S., & Hutter, M. (2007, July 25). *A collection of definitions of intelligence*. Unknown. https://www.researchgate.net/publication/1895883_A_Collection_of_Definitions_of_Intelligence
- Makridakis, S. (2017). The forthcoming Artificial Intelligence (AI) revolution: Its impact on society and firms. *Futures*, 90, 46–60. <https://doi.org/10.1016/j.futures.2017.03.006>
- Nalbant, K. G., & Aydin, S. (2023). Development and transformation in digital marketing and branding with artificial intelligence and digital technologies dynamics in the metaverse universe. *Journal of Metaverse*, 3(1), 9–18. <https://doi.org/10.57019/jmv.1148015>.
- Shaik, M. (2023). Impact of artificial intelligence on marketing. *East Asian Journal of Multidisciplinary Research*, 2(3), 993–1004. <https://doi.org/10.55927/eajmr.v2i3.3112>
- Stories, T. F. (2024, September 25). Unleashing AI: How Flipkart is Transforming E-Commerce with AI. *Flipkart Stories*. <https://stories.flipkart.com/ai-qna-mayur-datar/>
- Strugatz, R. (2015, November 18). Ralph Lauren debuts connected fitting rooms. *WWD*. <https://wwd.com/feature/ralph-lauren-oak-labs-connected-fitting-rooms-10280895/>
- Syam, N., & Sharma, A. (2018). Waiting for a sales renaissance in the fourth industrial revolution: Machine learning and artificial intelligence in sales research and practice. *Industrial Marketing Management*, 69, 135–146. <https://doi.org/10.1016/j.indmarman.2017.12.019>
- Verma, S., Sharma, R., Deb, S., & Maitra, D. (2021). Artificial intelligence in marketing: Systematic review and future research direction. *International Journal of Information Management Data Insights*, 1(1), 100002. <https://doi.org/10.1016/j.ijime.2020.100002>
- Vetterli, C., Uebernickel, F., Brenner, W., & Stermann, D. (2016, January 1). *How deutsche bank's IT division used design thinking to achieve customer proximity*. Unknown. <https://tinyurl.com/29xnbx48>

- Vlačić, B., Corbo, L., Costa e Silva, S., & Dabić, M. (2021). The evolving role of artificial intelligence in marketing: A review and research agenda. *Journal of Business Research*, 128, 187–203. <https://doi.org/10.1016/j.jbusres.2021.01.055>
- Vo, A.-D., Nguyen, Q.-P., & Ock, C.-Y. (2018). Opinion–Aspect relations in cognizing customer feelings via reviews. *IEEE Access*, 6, 5415–5426. <https://doi.org/10.1109/access.2018.2797224>
- Wirth, N. (2018). Hello marketing, what can artificial intelligence help you with? *International Journal of Market Research*, 60(5), 435–438. <https://doi.org/10.1177/1470785318776841>.
- Yahoo Video Search. (n.d. a). *Virtual labD sketch by Meta Quest* [Video]. Yahoo. Retrieved July 24, 2025, from <https://tinyurl.com/mrcas7k8>
- Yahoo Video Search. (n.d. b). *Virtual reality used by IKEA* [Video]. Yahoo. Retrieved July 24, 2025, from <https://tinyurl.com/mr2y4phs>
- YouTube. (n.d.). Retrieved July 24, 2025, from <https://www.youtube.com/watch?v=NrmMk1Myrxc>
- Zainab Efe Egieya, Sarah Kuzankah Ewuga, Abimbola Oluwatoyin Adegbite, & Timothy Tolulope Oke. (2023). The role of virtual and augmented reality in modern marketing: A critical review. *Computer Science & IT Research Journal*, 4(3), 244–272.