

MARKETING IN FASHION INDUSTRY IN WEB 3.0 ERA

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Abstract:

In an era of fast-paced technological change, the internet is evolving from Web 1.0 (static, one-way communication) and Web 2.0 (interactive, collaborative platforms) to Web 3.0, characterized by decentralization, artificial intelligence, blockchain, and a focus on authentic values and meaningful connections. Web 3.0 empowers consumers and transforms the internet into a decentralized platform where users control their personal data, intermediaries are replaced by smart contracts and blockchain, but it also introduces challenges such as technological complexity, security risks, regulatory difficulties, and interoperability with Web 2.0. Web 3.0 marketing emphasizes an approach that includes emotional, cultural, and spiritual dimensions, enabling brands to gain a profound and lasting relevance. In this paper we analyse the multifacets of Web 3.0 marketing in the fashion industry, a sector intensely transformed by social, cultural, and technological dynamics. We investigate how marketing principles and Web 3.0 technologies, such as non-fungible tokens (NFTs), the metaverse, and digital identity, are being incorporated into fashion brand strategies, highlighting the benefits and challenges of building authentic relationships with consumers. Fashion brands are embracing emerging technologies to create immersive experiences and loyalty through NFTs, augmented reality, and virtual spaces in the metaverse.

Keywords: *marketing in Web 3.0, fashion industry, artificial intelligence, metaverse, NFT*

1. Introduction

In an era where technology is profoundly reshaping interactions between individuals and organizations, marketing as both a discipline and practice is undergoing a fundamental transformation. The transition from Web 1.0, characterized by unidirectional information flows, to Web 2.0, marked by interactive platforms and user-generated content (Chada et al., 2025), has established the groundwork for Web 3.0 — a new phase defined by decentralization, artificial intelligence, blockchain technologies, and, critically, by emphasis on value, meaning, and authentic connections (Ghelani and Hua, 2022). This study examines this transformative dimension of marketing and its implications within the fashion industry—a sector highly influenced by social, cultural, and technological dynamics.

Web 3.0 is not just a technological advance, but a paradigm shift. In this framework, consumers transcend the role of passive buyers to become co-creators, collaborators and advocates of the brands they trust. Marketing in Web 3.0 is at the intersection of emotional, cultural and spiritual complexity. Brands that effectively communicate not only their product and service offerings, but also the purpose and values that underpin their operations gain relevance in a deep and lasting way (France et al., 2024). These considerations acquire particular significance in the fashion industry, where identity, self-expression and personal values continuously intertwine with the concepts of style and consumption.

The main purpose of this research is to investigate how fashion brands use marketing principles in the light of new Web 3.0 technologies, identifying the benefits and challenges resulting in cultivating relationships with consumers. To this end, the study is structured in two complementary parts: a theoretical framework and an empirical investigation. The theoretical part provides an overview of the main concepts underlying marketing in Web 3.0, articulating its evolution from previous marketing paradigms and elucidating the influence of emerging technologies on consumer behavior and brand communication strategies. Key topics include co-creation of value, digital fashion, non-fungible tokens (NFTs), the metaverse, and the construction of digital identity in contemporary consumer contexts. The empirical part enriches the discourse with perspectives derived from the fashion industry. We analyze current brand communication practices, authentic brand building processes, effective audience engagement strategies, perceptions of new technologies, and the role these technologies play in purchasing decisions and customer loyalty.

The impact of this approach is twofold: first, it reflects the current state of affairs where digital transformation has evolved from an optional to an imperative for brands; second, it contributes to understanding how marketing is adapting to align with the values of contemporary society. Choosing fashion industry as a case study is justified by its innovative involvement in Web 3.0 innovations, which include NFTs, digital collections, and metaverse experiences.

The research questions are: How can fashion brands take advantage of Web 3.0? How does their marketing practices adapt to current technological developments? How do new digital marketing practices respond to evolutions and developments in consumer behavior?

2. An overview of internet development stages

Over the years, the Internet has experienced significant evolution. The initial phase, Web 1.0, functioned primarily as a static, "read-only" platform where users

could access but not interact with information. This era, spanning from 1990 to 2000, was characterized by prominent sites such as Britannica Online—a digital encyclopedia providing informational content—and Yahoo! Directory, which organized websites into manually curated lists. Information was provided to users, not shared with users.

What were the innovations brought by Web 2.0? The emergence of Web 2.0 generated a shift towards dynamic and interactive web technologies. Websites allowed for more intense interaction and collaboration between users, paving the way for social networks and user-generated content (Silva, 2022). In this way, social collaboration and social involvement increased, allowing individuals to connect with each other. Online games, e-learning platforms, and multimedia content are representative of Web 2.0. Platforms like Facebook allowed individuals to create profiles, share content, and engage with others, while YouTube transformed video sharing by enabling widespread public uploads. Wikipedia surpassed Britannica Online by fostering collaborative editing and content creation. However, the increased collection of user data by major corporations to refine advertising and improve the user experience raised notable privacy concerns. Interaction and engagement on social platforms come at cost. In Web 2.0, user data is collected and subsequently marketed to other interested parties.

In response to these concerns, Web 3.0 began to take shape around 2020. Powered by blockchain technology and artificial intelligence, Web 3.0 aims to establish a more equitable internet in which users could maintain control over their personal data. Web 3.0 is also called decentralized Web or Semantic Web. (Gorowara et al., 2025). This model minimizes reliance on intermediaries and supports secure, decentralized transactions (Rudman and Bruwer, 2016). Representative examples include Decentraland—a virtual environment permitting users to generate content and own digital assets without centralized governance (Trujillo and Bacciu, 2023); Bitcoin and other a blockchain platforms; decentralized finance (DeFi) offered by fintech companies that provide digital payments, loans, trading and Brave Browser, which redefined online advertising by compensating users with cryptocurrency for their engagement.

Web 1.0	Web 2.0	Web 3.0
Centralized content Lack of interactivity Static Html	User generated content Social media Dinamic Mobile access	Semantic web NFTs Users control their data Metaverse Artificial Intelligence

Figure 1. The difference between Web 1.0, 2.0 and 3.0

Source: Adapted from Silva, 2022

Web 3.0 is a step forward in the process of developing the Internet. It should be more user friendly and intuitive (Nasar, 2023). Although still in development, with new apps emerging on a regular basis, the main features of Web 3.0 are:

➤ **Decentralization.** Centralized control is eliminated and peer-to-peer interactions are facilitated and enhanced, in order to increase user experience.

➤ *Artificial intelligence.* Machine learning is used to automate processes, protect information, and to improve user experiences. Also, the speed of various processes is expected to increase using AI.

➤ *Semantic Web.* With the help of the Semantic Web, the internet is developed through a system that connects information in a format more easily processed by machines and not just understood by people. Thus, the data is read by the computer, which can process and understand it, thus contributing to increasing speed and interoperability.

➤ *Blockchain technologies.* They record digital operations and ensure clarity, security, and permanence in the digital space. Blockchain technologies have potential applications in various domains, such as finance, supply chain management, and healthcare.

It is true that Web 3.0 is much more decentralized, private, and secure than its predecessors. However, its potential is limited by existing constraints, which require a complex approach to overcome.

In relation with its complexity, we can argue that, compared to Web 2.0, Web 3.0 is based on blockchain technology, decentralized networks, and smart contracts, which makes it considerably more complex. This complexity increases the necessary resources, requires energy sources and hardware updates that come at high costs. From an Internet of documents to an Internet of data and applications, Web 3.0 needs resources to accommodate its enormous processing power. A new architecture might be required to support these distributed applications. Another area of concern is related to security issues. Cybersecurity will be of great importance in Web 3.0. The integration of AI, machine-learning, blockchain, legal frameworks, and widespread cybersecurity protocols contributes to a multidimensional defense mechanism against the diverse and evolving threats of Web 3.0 (Zaid and Garai, 2024). The lack of a centralized control creates difficulties in the regulation process of Web 3.0. Regulatory routines and compliance arrangements designed to maintain the safety of online users' data need to be enhanced.

3. The Impact of Web 3.0 in Marketing

Marketing in Web 3.0 offers a blend of decentralization, intelligent technologies, and omnipresent connectivity, that enable companies to redefine their traditional strategies by grasping innovative opportunities.

In today's business environment, organizations face the difficulty of dealing with large amounts of data, often not making full use of it or grasping its maximum potential, which highlights a significant gap in leveraging the transformative capabilities of data. However, managing this abundance of data can help companies to transform and enhance customers experience (Kumar, 2022), using personalizations and integrative advertising. As opposed to Web 2.0, where centralized platforms control user information, Web 3.0 gives users ownership over their own data, basically changing how companies acquire and use data for promotional purposes.

Artificial intelligence is already having a big impact on marketing practices. AI refers to actions that include analyzing and interpreting data, learning from data, and using learning to achieve specific goals and tasks. Artificial intelligence uses algorithms that allow machines to understand and produce natural language, learn from experience, and portray emotions, while being at the consumer's disposal and

providing them with a pleasant experience. AI agents can handle complex, high-volume conversations with an immediate response (Kotler et al., 2021). Augmented reality and virtual reality are used on large scale to help companies to engage with consumers.

Metamarketing is the new concept that integrates the physical and virtual realms of the contemporary consumers (Kotler et al., 2023). Metamarketing highlights the importance of creating a seamless customer journey, especially within young customers growing up with the Internet as an integral part of life without seeing a border between the physical and digital worlds.

New technological advances will make technology no longer seen as something external, and customers will no longer be able to differentiate between an action performed by an AI robot and human action. Chatbots are a type of virtual assistant software that conducts conversations with users via audio or text. They are designed to simulate human conversations. Chatbots are currently widely used and their interaction capabilities are remarkable.

Customer experience is at the intersection of the physical and digital realms. Companies are present where their customers are. Phygital customer experience combines online and offline touchpoints to create a seamless, omnichannel presence (Batat, 2019). Immersive experience can be offered through proximity marketing (personalized, location-based content), augmented marketing (digital experiences in physical environments), and contextual marketing (time-place synchronization) (Kotler et al., 2023).

Customers are no longer just passive recipients of advertising messages; instead, they actively participate in generating and personalizing the brand experience (Polat and Akgün, 2015). Marketing in Web 3.0 is based on transparency, interactivity, and ethical values. Personalization of communication in the digital environment involves adapting messages, offers and experiences to the profile, behavior and preferences of each individual user. This becomes possible thanks to advanced technological tools, which allow the collection and analysis of data in real time. Based on this data, brands can build targeted, relevant and personal messages, which give the consumer the feeling that is understood, appreciated and treated as an individual, not as a mass of undifferentiated public.

The transparency offered by Web 3.0 is one of the main pillars of marketing. Savy companies communicate openly and authentically with their audience. Communication is becoming increasingly interactive, transforming the relationship between companies and consumers into a continuous and direct dialogue. Companies must offer more than utility; they must satisfy emotional and spiritual needs, basing their approach on ethical principles, meaning and authenticity. Thus, marketing in Web 3.0 redefines the relationship between brands and consumers, emphasizing collaboration, shared values and a deeper connection between the participating entities (Barbu et al., 2020).

Web 3.0 allows for interactive campaigns in the metaverse. Companies can create virtual showrooms where users can explore and purchase both digital and physical products. Companies like Nike and Adidas have launched NFT collections that provide owners with access to unique items and exclusive experiences.

4. Research Methodology

This study adopts a qualitative research approach to explore how fashion brands are adapting their marketing activities to Web 3.0. Qualitative design was chosen because the research aims to interpret marketing meanings, symbols and narratives, rather than measuring numerical variables. This approach allows for a deeper understanding of how brands negotiate their future and consumer expectations in light of current technological challenges.

The research relied on secondary data sources, including brand websites, official social media pages, online advertisements, press releases and media coverage of fashion brands. A thematic content analysis was used to interpret the data. The collected materials were examined for themes related to marketing strategies, tools used, their effectiveness in Web 3.0. The use of multiple data sources provided a rich basis for identifying recurring patterns in marketing adaptation to Web 3.0.

The analysis is interpretive rather than statistical, highlighting the transformation of marketing in Web 3.0. By synthesizing theoretical perspectives with real-world brand practices, the study provides an informed understanding of the dynamics shaping fashion brands' marketing strategies within Web 3.0.

5. The Fashion Industry and Web 3.0

Major clothing manufacturers are incorporating Web 3.0 tools to boost revenue and enhance brand image, adopting advanced technologies such as NFTs, augmented reality (AR), the metaverse, and blockchain. These innovations enable fashion brands to create engaging digital experiences, strengthen customer loyalty, and gain access to new market segments. The fashion industry is rapidly adopting Web 3.0 technologies with the aim of generating innovative experiences and enhancing product authenticity. Their integration represents a significant opportunity for innovation and adaptation to new market demands. However, the success of this transition depends on a prudent approach to the associated challenges and the commitment of brands to invest in the development and implementation of these technologies. Brands, through their considerable intangible power, are further defined as personalities, compact symbols, identity systems, value systems, and continuously evolving entities. In fashion industry marketing, the inseparable characteristics of products and brands, expressed through brand prominence, are both significant; discussions about the two cannot be treated separately. Products constitute the foundation on which the brand is built, while branding represents an essential method to communicate values that go beyond visible and technical aspects. People do not consume products and services, but brands. Consumption is currently a social act loaded with symbolic meanings (Kornberger, 2010). Brand preference is more important than product attractiveness when consumers make their selections. By showcasing brand components, fashion brands can repeatedly evoke consumers' positive associations, built through previous marketing activities.

5.1 NFTs and Digital Fashion

The fashion industry has been influenced by the emergence of NFTs (Non-Fungible Tokens), transforming the way entities interact with consumers and generate value. NFTs are unique digital assets recorded on the blockchain that guarantee the authenticity and ownership of a virtual item. In the fashion sector, these tokens revolutionize both the conception and commercialization of digital

items. Luxury brands such as Gucci, Louis Vuitton, and Balenciaga have launched NFT collections that allow users to purchase digital clothing for the metaverse. These digital assets offer a new mode of expression and exclusivity in the virtual world. These can be used to customize avatars in virtual spaces like Decentraland or The Sandbox. In this way NFT contribute to increased revenues for companies, as brands can earn royalties on each subsequent NFT transaction, generating passive income. Thou marginal in size, these revenues can go up as more consumers embrace the Web 3.0.

NFTs in the fashion industry are associated with authenticity and traceability. A major challenge for the fashion sector is counterfeit items. Blockchain technology facilitates tracking products from creators to end users, ensuring their authenticity. Gucci introduced an NFT collection that provides access to exclusive physical items and unique digital experiences. NFTs scarcity, resaleability, and trendiness contribute to brand equity and brand purchase intention (Cho et al., 2024). Consumers concerns about NFTs' authenticity can be surpassed as NFTs can be verified based on blockchain technology (Profumo et al., 2024). For example, Prada and LVMH use blockchain to provide digital certificates of authenticity. Another aspect of NFTs is that the customers' needs are better met, and that NFT acts as preliminary marketing research. For example, launching a digital collection first, can indicate if the public will accept it or reject it. In this way, significative savings can be made. From a sustainability perspective, reduction in physical manufacturing and elimination of textile waste, can contribute to positive environmental and social impact. Brands have the opportunity to experiment with digital collections before their physical production. Web 3.0 supports sustainability by reducing physical production and employing digital clothing in place of fast fashion items. In this way, consumers can experience fashion without harmful environmental impact. It is worth mentioning the global accessibility of NFTs, as anyone can acquire virtual clothing items, unrestricted by traditional physical stock limitations.

Platforms such as Decentraland offer users the possibility to customize their avatars with digital clothing items in the form of NFTs. These garments, created by designers or fashion brands, can be purchased and used exclusively in virtual spaces, while also reflecting the user's personal style and digital identity. In the metaverse, digital fashion becomes a symbol of virtual identity. Brands like Nike (via its RTFKT platform) develop sports footwear as NFTs, while Adidas partners with BAYC (Bored Ape Yacht Club) to launch exclusive digital collections. In the future, users will be able to virtually try on clothes and wear them in interactive digital universes. The application of blockchain technology allows brands to provide identification and authenticity for their products. By implementing digital passports for items, consumers can verify the origin and authenticity of fashion goods, thereby strengthening trust in the brand and reducing the risk of counterfeiting. For example, Pandora has integrated blockchain technology to give customers detailed information about their purchased products, thus enhancing the shopping experience and building brand loyalty. Even if the valuations of NFTs are under questions and some projects closed down such as RTFKT, not all NFTs will lose value in the future. These experimental projects can stay at the foundation of other marketing innitiatives in fashion industry in Web 3.0.

5.2 Transformation of shopping experience in fashion industry

The shopping experience has undergone a revolution under the impact of new technologies, especially artificial intelligence (Aggarwal, 2024). Web 3.0 technology

is fundamentally transforming user behavior and the way individuals interact with businesses and brands. For example, personalized shopping experiences are facilitated by artificial intelligence and blockchain technology. It is also worth mentioning the integration of gamification elements into brand interactions through the use of NFTs and the granting of digital rewards. Co-creation and collaborative development of products and services through decentralized platforms and online communities contribute to the empowerment of customers and the augmentation of the shopping experience. In Web 3.0, increased attention is paid to personal data and the elimination of intermediaries in transactions.

Digital transformation and the integration of advanced technologies is essential for companies to be able to offer an inclusive shopping experience. The adoption of digital technologies such as artificial intelligence (AI) and augmented reality contributes to offering personalized and interactive experiences to customers. Companies in the fashion industry must learn to navigate these tools and integrate them into their current operations (Ramos et al., 2023; Kang, et al., 2016).

Modern customers expect personalized and transparent shopping experiences. The increasing use of social media and e-commerce has empowered consumers, leading brands to adapt their marketing strategies to meet these expectations. This requires a deep understanding of individual preferences and authentic communication. Using AI fashion companies can listen and hear their customers better than ever. A customer who feels understood will be attracted to the company's offer.

Omnichannel experience is a prerequisite for any approach to managing the customer experience in the fashion industry. To remain competitive, brands must adopt and implement an omnichannel strategy and refine their supply chain strategies. The use of immersive technologies can contribute to improving the customer experience in digital environments (Batat, 2024).

FFFACE.ME is an international agency specialized in augmented reality AR filters and mirrors, digital fashion and beauty products, AI and Mixed Reality projects. FFFACE.ME collaborate with fashion houses to create (AR) experiences that allow customers to interact with products in innovative ways. For example, the partnership between FFFACE.ME and Bershka led to the launch of a semi-digital collection in which physical clothing items are enhanced by digital elements visible through AR filters. This approach not only captures consumers' attention but also drives sales by offering a unique experience. The use of immersive technologies is relevant for digital consumers and therefore these technologies provide them an enhanced brand experience (Park and Lim, 2023).

By adopting Web 3.0 tools, companies in the fashion industry not only diversify their sales and promotion channels but also create personalized and interactive experiences that meet the expectations of modern consumers. This transition to a digital and decentralized approach represents a significant opportunity for innovation and growth within the fashion sector.

Customers are becoming increasingly aware of the environmental and societal impact of the products they purchase. The fashion industry, especially the fast fashion sector, faces criticism for overproduction, waste, and unsafe working conditions. Brands need to adapt their marketing strategies to highlight sustainable and socially responsible practices, which can be challenging in a highly competitive environment. AI could provide innovative solutions to tackle waste management challenges and optimize overproduction (Ramos et al, 2023).

5.3 Challenges of Digital Fashion and Metaverse

With rising interest in the metaverse and virtual worlds, fashion brands explore novel ways to interact with customers. Yet, entry into these digital spaces raises questions about authenticity, intellectual property, and user experience. Collaborations between fashion entities like Prada and Balmain with virtual influencers have sparked both enthusiasm and controversy. Managing these challenges calls for a flexible promotional approach that combines technological innovation with ethical and sustainable principles while simultaneously responding to the ever-changing expectations of consumers.

By integrating into the metaverse, brands can create virtual stores and host digital events, thereby expanding their presence and reaching new consumer segments. For example, Versace has used platforms like Fortnite and Snapchat to promote its Mercury sneakers, capturing the attention of Generation Z and creating an engaging brand experience in the virtual environment. Companies like Gucci, Louis Vuitton and Benetton use metaverse to connect with consumers and enhance brand engagement (Kniazeva et al., 2024).

The integration of NFTs into the fashion sector and the metaverse presents new prospects for personal expression, sustainability, and innovative business models. With technological progress, a growing number of brands are expected to implement these digital solutions to meet the demands of modern consumers.

6. Conclusions

Technological evolution cannot be stopped, and the transition to Web 3.0 is a natural evolution of the Internet. Marketing is adapting to Web 3.0 in response to changes in consumer behavior and the need for organizations to embrace new technologies. This adaptation process, based on principles of sustainability, empathy, and co-creation, redefines both the strategic objectives and operational mechanisms of marketing, while simultaneously promoting a deeper and longer-term relational dynamic between organizations and consumers. By integrating Web 3.0 technologies including blockchain, non-fungible tokens (NFTs), virtual reality, and metaverse environments, organizations are taking advantage of new interactive and relational spaces that create new opportunities for consumer engagement and strategic orientations.

The fashion industry, due to its intrinsic links to culture, identity, and evolving trends, constitutes a particularly important context for analyzing these paradigm shifts. The sector's progression towards digital fashion, the proliferation of virtual assets, the exploitation of NFTs and the involvement in decentralized platforms are indicative of an ongoing structural transformation. However, there is remarkable heterogeneity in the degree of adoption, understanding and operationalization of marketing within Web 3.0 frameworks among industry participants, conditioned by resource availability, innovation readiness and specific market contingencies.

Despite the advantages of marketing in Web 3.0 described in the paper, critical questions remain open. These include industry stakeholders' perceptions of these emerging technological and marketing constructs, their openness to adoption and the practical obstacles encountered during implementation processes. Future research will examine how professionals perceive and implement these tools and principles in practice. AI, in its conversational and integrated form, together with

virtual reality, are of great help to fashion companies and offer significant potential for improving shopping experiences.

In conclusion, Web 3.0 marketing responds to the demands of a changing society by promoting collaboration, sustainable values, and authentic connections between brand and consumer. The fashion industry, closely tied to identity and culture, is a fertile ground for Web 3.0 innovations, although adoption varies depending on resources and openness.

REFERENCES

- Aggarwal, D., Sharma, D., & Saxena, A. B. 2024. Enhancing the online shopping experience of consumers through artificial intelligence. *International Journal of Information technology and Computer Engineering*, 4, 1-5. <https://doi.org/10.5-5529/ijitc.42.1.5>
- Barbu, M.C.R., Barbu, C.M. and Diaconescu, D.L. 2020. Marketing developments in the sharing economy. In: R. Pamfilie, V. Dinu, L. Tăchiciu, D. Pleșea, C. Vasiliu eds. *6th BASIQ International Conference on New Trends in Sustainable Business and Consumption*, Messina, Italy, June 2020. Bucharest: ASE, p. 97-104.
- Batat, W. 2019. *Experiential marketing: Consumer behavior, customer experience and the 7Es*. Routledge.
- Batat, W. 2024. Phygital customer experience in the metaverse: A study of consumer sensory perception of sight, touch, sound, scent, and taste. *Journal of Retailing and Consumer Services*, 78, 103786. <https://doi.org/10.1016/j.jretconser.2024.103786>
- Chada, L. M., Parashar, H. V., Singh, I., Rastogi, M., Singh, S., & Raja, S. P. 2025. A comparative analysis of Web 3.0, Web 2.0, and Web 1.0: evolution and implications. *International Journal of Learning and Change*, 17(1), 1-55. <https://doi.org/10.1504/IJLC.2025.143530>
- Cho, M., Ko, E., & Taylor, C. R. 2024. Do non-fungible tokens create long-term value for luxury brands? The effect of NFT promotions on customer equity. *Computers in Human Behavior*, 159, 108347. <https://doi.org/10.1016/j.chb.2024.108347>
- France, C., Gonzalez-Arcos, C. F., O'Rourke, A. M., Spry, A., & Bruce, B. 2024. Brand purpose: a literature review and BEING implementation framework. *Journal of Product & Brand Management*, 33(7), 929-945. <https://doi.org/10.1-108/JPBM-08-2023-4663>
- Ghelani, D., & Hua, T. K. 2022. Conceptual framework of Web 3.0 and impact on marketing, artificial intelligence, and blockchain. *International Journal of Information and Communication Sciences*, 7(1), 10. 10.11648/j.ijics.20220701.12
- Gorowara, N., Kumar, V., & Yadav, S. 2025. The Next Digital Frontier: Challenges and Strategies in Verma, B., Mittal, A., Raman, M., & Sindhav, B. (Eds.). (2025). *Web 3.0 Unleashed: Transforming Industries and Building Ethical Frameworks*. Emerald Group Publishing.

- Kang, M., Shin, D. H., & Gong, T. 2016. The role of personalization, engagement, and trust in online communities. *Information Technology & People*, 29(3), 580-596. <https://doi.org/10.1108/ITP-01-2015-0023>
- Kniazeva, M., Aiello, G., Dasmi, C., Mazzoli, V., Nechaeva, O., & Syed, F. U. 2024. Why fashion brands enter the metaverse: Exploring the motivations of fast fashion and luxury fashion brands. *Journal of Global Fashion Marketing*, 15(1), 62-89. <https://doi.org/10.1080/20932685.2023.2269952>
- Kornberger, Martin 2010, *Brand Society: How Brands Transform Management and Lifestyle*, Cambridge University Press.
- Kotler, P., Kartajaya, H., & Setiawan, I. 2021. *Marketing 5.0: Technology for humanity*. John Wiley & Sons.
- Kotler, P., Kartajaya, H., & Setiawan, I. 2023. *Marketing 6.0: The future is immersive*. Hoboken, NJ: John Wiley & Sons.
- Kumar, R. S. 2022. An Overview of the Expected Influence of Web 3.0 on E-Commerce and Allied Domains. *International Journal of Trendy Research in Engineering and Technology*, 6(6).
- Nasar, M. 2023. Web 3.0: A review and its future. *International Journal of Computer Applications*, 185(10), 41-46.
- Park, H., & Lim, R. E. 2023. Fashion and the metaverse: Clarifying the domain and establishing a research agenda. *Journal of Retailing and Consumer Services*, 74, 103413. <https://doi.org/10.1016/j.jretconser.2023.103413>
- Polat, V., & Akgün, A. E. 2015. A conceptual framework for marketing strategies in web 3.0 age: adaptive marketing capabilities. *Journal of Business Studies Quarterly*, 7(1), 1.
- Profumo, G., Testa, G., Viassone, M., & Ben Youssef, K. 2024. Metaverse and the fashion industry: A systematic literature review. *Journal of Global Fashion Marketing*, 15(1), 131-154. <https://doi.org/10.1080/20932685.2023.2270587>
- Ramos, L., Rivas-Echeverría, F., Pérez, A. G., & Casas, E. 2023. Artificial intelligence and sustainability in the fashion industry: a review from 2010 to 2022. *SN Applied Sciences*, 5(12), 387. <https://doi.org/10.1007/s42452-023-05587-2>
- Rudman, R., & Bruwer, R. 2016. Defining Web 3.0: opportunities and challenges. *The electronic library*, 34(1), 132-154. <https://doi.org/10.1108/EL-08-2014-0140>
- Silva, S. 2022. Web 3.0 and Cybersecurity–Short Paper. *ARIS2-Advanced Research on Information Systems Security*, 2(2), 39-49. <https://doi.org/10.56394/aris2.v2i2.21>
- Trujillo, A., & Bacciu, C. 2023. Toward blockchain-based fashion wearables in the metaverse: the case of decentraland. In *2023 IEEE International Conference on Metaverse Computing, Networking and Applications (MetaCom)* (pp. 653-657). IEEE.
- Zaid, T., & Garai, S. 2024. Emerging trends in cybersecurity: a holistic view on current threats, assessing solutions, and pioneering new frontiers. *Blockchain in Healthcare Today*, 7, 10-30953. [10.30953/bhty.v7.302](https://doi.org/10.30953/bhty.v7.302)