

Smart Style: How AI is Changing the Course of Fashion Marketing

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Abstract

The implementation of artificial intelligence in fashion marketing has accelerated rapidly, changing how companies approach personalization, branding, and consumer experience. The purpose of this paper is to examine how artificial intelligence is reshaping marketing strategies in the fashion industry and to determine its impact on content generation, supply chain efficiency, and customer interaction. Analyzing academic literature and brand case studies, it identifies how tools like AI chatbots, generative models, and recommendation algorithms are redefining the fashion landscape. At the same time, challenges persist regarding ethical transparency, over-automation, and the authenticity of AI-generated content. The research includes data from a consumer survey that explores public trust in AI-generated marketing and preferences around disclosure. Although artificial intelligence is seen as a tool for convenience and relevance, many respondents still value the human touch in fashion narratives. The paper concludes by proposing a framework for ethical and consumer-centric AI integration in fashion marketing. Ultimately, the study offers insights into how fashion marketers can responsibly implement AI while maintaining authenticity and consumer trust in an increasingly digital environment. This study explores how AI shapes consumer behavior and marketing strategies in the fashion industry, focusing on personalization, chatbots, virtual influencers, trend forecasting, and sustainability. Findings suggest that while AI enhances customer experience and operational efficiency, fashion companies must adopt it responsibly, ensuring ethical use, transparency, and data privacy to mitigate potential risks.

Keywords: Fashion marketing, artificial intelligence, consumer behavior, content generation, digital environment.

JEL classification: M31.

Introduction

Although artificial intelligence is increasingly used in the fashion industry, this research focuses on sustainability, trend forecasting, personalization, chatbots, virtual influencers, and content creation, while most studies focus on individual applications. Few provide an integrated view of how AI shapes consumer behavior, marketing strategies, and ethical challenges. This study aims to fill this gap by offering a holistic analysis of AI's impact in fashion.

According to Kouslis et al. (2024, p. 1), artificial intelligence has a significant impact, particularly in the fashion industry, where its technology is poised to become a prominent asset. "In an area where adaptability and innovation are paramount to success, AI can revolutionize many aspects, such as the design process and fashion recommendations to the consumers" (Kouslis, et al., 2024, p. 1).

As Banerjee (2021, p. 165) claims, the question that has to be asked is 'What makes the cloth?' because the "Clothes make the man" (Banerjee, et al., 2021, p. 166) and the fashion industry is trying to answer using artificial intelligence, deep learning, machine learning, internet of things, and human-robot interface. "Artificial intelligence can process humungous

volumes of data and create business insights, which saves time, reduces errors, minimizes cost, and aids current business practices” (Banerjee, et al., 2021).

It was found that the A.I. model can generate rich attribute descriptions of detected regions and accurately bind the garments in the images. “Adoption of A.I. algorithm demonstrated promising results and the potential to classify garment types and details automatically, which can make the process of trend forecasting more cost-effective and faster.” (Shi & Lewis, 2020, p. 1).

When it comes to customer services and virtual assistants in the fashion industry, Kang et al. (2024; p. 1) state that this industry can benefit from artificial intelligence, “utilizing tools ranging from predictive analytics to computer vision for identifying product features. AI-powered chatbots facilitate faster communication via auditory or textual means” (Kang, et al., 2024).

1. Literature review

1.1. AI sustainability in the fashion industry

As Lima (2023, p. 461) claims, a big step forward in making fashion more eco-friendly is using AI to reduce the usage of fabric. The artificial intelligence is programmed to analyze production data and to calculate how much fabric each clothing item needs. This process’s purpose is to reduce waste, save a considerable amount of material during production, help companies work efficiently, and save money. “With the help of AI, it is possible to transform old fabrics and production leftovers into new, high-quality products, reducing the need for natural resources to make new materials and contributing to a more circular production cycle.” (Lima, 2023, p. 462). The fashion industry is increasingly adopting artificial intelligence to enhance sustainability, and as Ramos, et al. (2023, p. 2) states, AI (artificial intelligence) focuses on developing systems that replicate human cognitive abilities, especially in solving complex problems. Moreover, “this benefits the environment and society as AI makes it possible to process and use natural and human resources better” (Ramos, et al., 2023, p. 2).

1.2. Trend forecasting and design

Fashion’s forecasting role is to identify future trends, create trend reports, and offer strategies for their implementation in order to enhance fashion design and product sales, as An & Park (2020, p. 2) explain. “Fashion trend forecasters collect and analyze various references to translate into design concepts, details, colors, and patterns that will be considered fashionable in the next season” (An & Park, 2020, p. 2)

“The fashion industry is a low-automation and intensive manufacturing industry where consumers’ demand and expectations change rapidly. AI can aid supply chain management, design, and customer service. Accurate demand forecasting is an integral part of fashion retailing and supply chain management” (Savolainen, 2023). “Artificial intelligence techniques, particularly deep learning models, have brought about transformative changes in time series forecasting. Techniques such as recurrent neural networks (RNNs), long short-term memory (LSTM) networks, and gated recurrent units (GRUs) have demonstrated their effectiveness in handling sequential data.” (Song, 2021, p. 2). Recently, transformer models have gained attention for their strong performance in analyzing time-based data. On top of that, AI makes it easier for marketers and businesses to forecast trends in real time, and estimate future demand across industries, as Song (2021, p. 2) claims.

1.3. Personalization in Fashion Shopping

As Esposito & Willie (2025, p.3) claim, AI-driven personalization in e-commerce, has become a key way to improve customer experience. With the help of machine learning, online

shops are now able to recommend products based on each shopper's behavior and preferences. The personalized recommendations are made through systems using smart algorithms, in order to deliver highly relevant suggestions. "In the fashion industry, recommendation engines help consumers discover new styles that align with their preferences, leading to a more enjoyable shopping experience" (Esposito & Willie, 2025, p. 3).

1.4. Chatbots and Virtual Assistants in Fashion

AI-powered chatbots are able to provide benefits such as interactivity, access to information, visibility and the ability to connect with users anytime and everywhere. Chatbots can deliver information through images, text, or links, making the experience user-friendly. Additionally, chatbots make it easier for users to access services quickly and with minimal effort, as Ranjan & Upadhyay (2025, pp. 2-3) state. Also, Ranjan & Upadhyay (2025, p. 3) highlight users are more motivated to solve problems through chatbots, when information is well connected and easy to access. It is pointed out that users feel the interaction more personal as long as chatbots use verbal cues that mimic human speech. "An automated chatbot is necessary to generate value for consumers. it must first be created using an eye-catching user interface that evokes feelings and thoughts. Digital devices, such as computers, tablets, smartphones, and other comparable gadgets, can facilitate these chatbot interfaces. second, it must be sufficiently customizable to suit various user groups. third, its operation must resemble that of other modern platforms" (Ranjan & Upadhyay, 2025, p. 3).

1.5. Virtual Influencers and AI content creation

According to Si (2024, pp. 310-311), virtual influencers play an important role in brand promotion, especially on social media. Their purpose is not only representing brands, but also to build strong connections with a specific audience through carefully designed engagement tactics and content. One of the most important parts of virtual influencers is the level of consistency and control they offer. Brands and marketers can manage every aspect, from their look and personality to the way they deliver the message to audience, ensuring that all communications are aligned and free from risks, avoiding controversies or scandals. When it comes to their cost, once developed, a virtual influencer is able to be used over and over in different campaigns, without the physical limits of human being, making them efficient and flexible marketing tools.

Another advantage is their trendy and innovative appeal. They draw attention, especially among a younger audience who tend to be more comfortable with technology development and digital trends. "Moreover, virtual influencers can leverage data-driven strategies to create highly personalized content, targeting specific demographics with tailored messages. This precision in targeting and content delivery makes virtual influencers an effective tool for increasing brand engagement and loyalty" (Si, 2024, p. 311).

1.6. Ethics and AI Challenges

Manchiraju (2025, p. 4031) talks about the need to update legal frameworks and ethical standards of AI technologies, in order to keep pace with new challenges, including the fashion industry. With artificial intelligence now playing an important role in everything from design to retail, the concerns about privacy, data security and employment are increasing. To ensure the responsible use of AI in fashion, the update of ethical guidelines must happen. These standards should help companies use AI in ways that minimize potential harm while benefiting society. "For example, the use of AI in personalized advertising must comply with updated privacy regulations that protect consumer data. The IEEE's P7000 standards project is an initiative aimed at addressing ethical issues in the design of autonomous and intelligent

systems, which could be applied to the fashion industry to ensure responsible AI integration” (Manchiraju, 2025, p. 4031)

2. Methodology

The research used a quantitative approach, employing the snowball sampling method to gather data from a sample of 385 respondents. This non-probability sampling technique relies on initial participants recommending the survey to others, helping reach a wider audience. Data was collected through an online questionnaire, shared digitally over a defined period. Data analysis was conducted with the use of descriptive statistics, including frequency distributions and percentages, in order to evaluate trends. From the total of 385 respondents, aged 18-45, 52% are female, and 48% are male participants, with diverse shopping habits, ensuring a broad perspective toward AI-driven tools in fashion industry.

3. Results and discussion

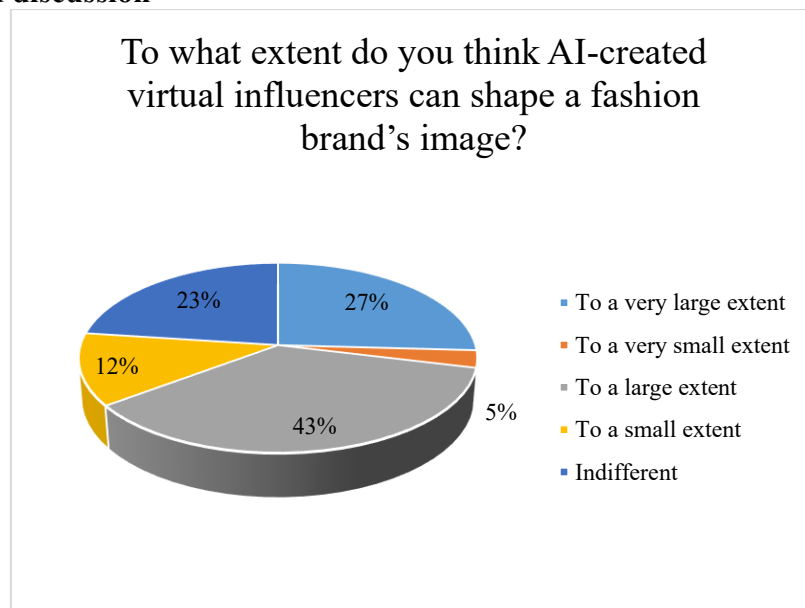


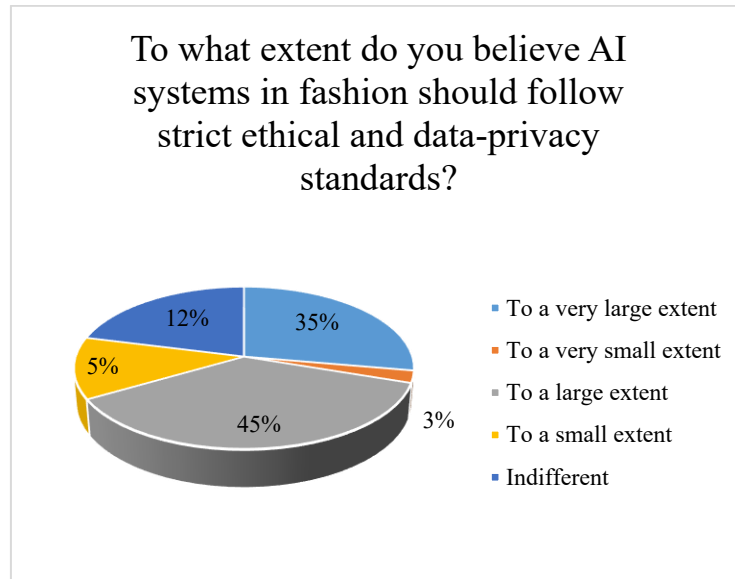
Figure 1. Virtual influencers

Source: Author's own research

With 70% of respondents indicating that AI-created virtual influencers can shape a fashion brand's image (43% to a large extent, 27% to a very large extent), the results reflect a strong perceived potential for these digital figures in branding.

From a marketing perspective, this suggests that virtual influencers are no longer seen as mere novelty—they are becoming credible tools for brand positioning and identity building. Their appeal lies in full creative control, consistency, and scalability, making them ideal for visual campaigns, trend-led storytelling, or aligning with futuristic brand values.

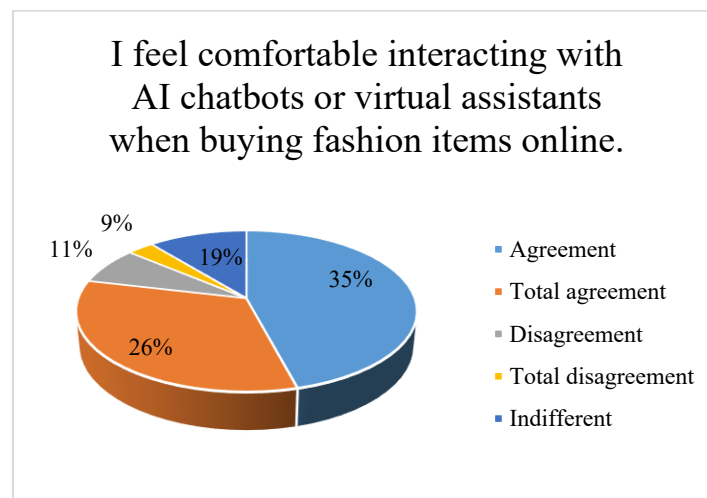
However, with 23% neutral and only 17% expressing doubt, it's still wise for marketers to combine virtual influencers with human ambassadors, especially when aiming to build emotional trust or authenticity. In short, AI personas are gaining legitimacy and can be powerful assets if used strategically and creatively.

**Figure 2. Ethical and data-privacy standards**

Source: Author's own research

With 80% of respondents supporting strong ethical and privacy standards, it's clear that trust is a key factor in how consumers perceive AI use in fashion. For marketers, these results could show that AI integration must be transparent and responsibly communicated. People want to know how their data is used and expect algorithms to be fair and unbiased.

Only 8% show resistance, but overlooking this expectation could negatively impact brand credibility. In short, ethical AI is not just compliance, it's a strategic asset that builds consumer loyalty and strengthens brand positioning in a data-driven world.

**Figure 3. AI chatbots and virtual assistants**

Source: Author's own research

61% of respondents feeling comfortable using AI chatbots during online shopping, there's clear consumer acceptance of automated support tools in fashion retail.

For marketers, this opens up opportunities to increase customer experience through AI-powered assistance, such as size recommendations, style suggestions, or real-time support. Also, the 19% neutral and 20% uncomfortable show that chatbots still need to feel human, intuitive, and non-intrusive.

To build trust and prevent friction, brands should ensure chatbot experiences are well-designed, empathetic, and offer a quick path to live help when needed. Used correctly, chatbots can improve efficiency and even drive conversions, especially when they align with customer expectations for speed and convenience.



Figure 4. AI personalization

Source: Author's own research

With 71% of respondents agreeing that AI-driven personalization enhances their shopping experience, it's evident that customized product suggestions are truly appreciated in fashion industry.

For marketers, this means that investing in recommendation engines and personalized content directly supports user satisfaction in order to boost sales. However, the 14% neutral and 15% disagreeing remind us that over-personalization or irrelevant targeting can become intrusive or ineffective.

To maintain a positive impact, brands should offer personalization that feels helpful, not pushy, and give users control over how much tailoring they receive. When done right, AI personalization becomes a key differentiator in digital retail experiences.

Conclusions

The integration of artificial intelligence into fashion marketing is increasingly seen not just as a technical innovation, but as a valuable asset for enhancing the customer experience. Consumers' responses to personalized interactions are positive, especially when AI is used to recommend products that match their preferences and life-style activities. This reveals an important direction for brands: customization should no longer be considered an option, but an expected part of the digital shopping experience.

Interactions with chatbots and virtual assistants are also gaining popularity, being designed to be user-friendly and human in tone. Customers are open to automated support, but they still value emotional connection and the ability to speak to a real person when needed. This balance between efficiency and empathy is crucial in maintaining engagement and reducing the uncertainty in the buying process.

At a strategic level, consumers show increasing confidence in the use of AI to guide decisions, such as trend forecasting and product development. They no longer see data and creativity as opposing forces; instead, they expect brands to use technology to stay relevant, as long as the final result still reflects originality and a clear aesthetic vision.

Interestingly, even the more experimental applications of AI, such as virtual influencers, are starting to gain popularity in the eyes of the public. This opens new storytelling possibilities for brands that want to stand out, especially among younger audiences who are more receptive to digital experimentation.

However, one of the clearest messages from consumers is the need for ethical boundaries. AI in fashion must operate transparently, respect privacy, and avoid manipulative practices. Brands that fail to address these concerns risk damaging their credibility, regardless of how advanced or personalized their technology may be.

In essence, consumers are no longer just tolerating AI, they are beginning to want it. But they expect it to be used with purpose, respect, and creativity. For marketers, this means that success lies not in the technology itself, but in how well it is aligned with human needs, brand values, and responsible communication.

However, consumers feel the need for ethical boundaries: AI must operate transparently, respect privacy, and avoid manipulative practices. Main challenges may include data misuse, over-reliance on automated tools, and the potential loss of human touch in consumer interactions. The study's limitations include its reliance on a single online questionnaire and a non-probability snowball sample, which may affect the generalizability of the results. Future research should explore diverse populations, impacts of AI on consumer behavior, and the integration of emerging AI technologies in fashion marketing.

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