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AI-ENABLED ONLINE SHOPPING FEATURES AND THEIR EFFECTS ON BRAND LOYALTY AND PURCHASE INTENTION IN FASHION RETAIL

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Abstract:
The growing use of artificial intelligence (AI) in online fashion retail has shifted its role from a purely functional technology to a strategic tool for building consumer–brand relationships; however, limited empirical research explains how AI-enabled online shopping features influence brand loyalty and purchase intention. Addressing this gap, this study investigates the effects of AI-enabled online shopping features on purchase intention, with brand loyalty as a mediating variable in the UK fashion retail context. Drawing on the Technology Acceptance Model and brand loyalty theory, AI-enabled features are conceptualised in terms of perceived usefulness. Using a quantitative, cross-sectional survey of UK consumers with prior experience purchasing from H&M's online platform, the proposed relationships were tested through regression-based mediation analysis. The findings indicate that AI-enabled online shopping features perceived as

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useful have a significant positive effect on both brand loyalty and purchase intention, and that brand loyalty partially mediates the relationship between AI-enabled features and purchase intention. These results suggest that AI-driven personalisation and usefulness enhance not only functional shopping efficiency but also emotional and behavioural attachment to brands. By integrating brand loyalty into a TAM-based framework, this study extends technology adoption research and highlights the strategic importance of AI as a long-term brand-building mechanism in digital fashion retail.

JEL: M15; M31; L81; D91

Keywords: Artificial Intelligence (AI); AI-enabled online shopping features; brand loyalty; purchase intention; fashion retail

1. Introduction

The fashion retail industry has undergone a significant digital transformation in recent years, with artificial intelligence (AI) increasingly embedded within online shopping environments. In the UK apparel sector, AI-enabled online shopping features—such as personalised product recommendations, virtual try-on tools, and AI-powered chatbots—are now widely deployed to enhance customer experience and brand engagement (Dwivedi *et al.*, 2021; Ameen *et al.*, 2021). Rather than serving purely operational or efficiency-driven purposes, these AI applications are increasingly positioned as strategic branding tools, enabling fashion retailers to deliver personalised, interactive, and value-enhancing consumer experiences that foster stronger brand relationships.

Fashion retail is inherently experienced-driven and highly competitive, particularly in online environments where consumers face abundant brand alternatives and low switching costs (Blázquez, 2014). As a result, brand loyalty has become a critical strategic asset, influencing repeat purchasing behaviour, long-term customer value, and brand resilience in digital markets (Oliver, 1999; Rather *et al.*, 2021). AI-enabled shopping features play a growing role in this process by facilitating tailored interactions, reducing decision-making uncertainty, and reinforcing consumers' perceptions of brand relevance and usefulness (Batool & Mou, 2024; Bag *et al.*, 2021). When AI technologies are perceived as useful, intuitive, and aligned with consumer needs, they can strengthen both emotional and behavioural attachment to brands.

Despite the growing adoption of AI in fashion retail, empirical research examining the mechanisms through which AI-enabled online shopping features influence brand loyalty and purchase intention remains limited, particularly within the UK apparel context. Prior studies grounded in the Technology Acceptance Model (TAM) have primarily focused on perceived usefulness and ease of use as predictors of technology adoption and purchase intention (Davis, 1989; Venkatesh *et al.*, 2003). However, these studies often overlook brand loyalty as a mediating construct, leaving insufficient understanding of how AI-driven value perceptions translate into sustained brand

relationships and subsequent purchasing behaviour (Cheng & Jiang, 2021; Nikhashemi *et al.*, 2020).

This gap is especially salient in the context of major fashion retailers such as H&M, which has made substantial investments in AI-driven digital innovations across its UK online platforms. H&M employs AI-based recommendation systems, virtual fitting technologies, and conversational agents to enhance personalisation and streamline the online shopping journey (Wightman-Stone, 2023). While these features are designed to increase perceived usefulness and shopping convenience, there is limited empirical evidence explaining whether and how they contribute to brand loyalty formation and purchase intention within the UK apparel market. Given increasing consumer concerns surrounding data privacy, algorithmic transparency, and trust, understanding these relationships is both theoretically and managerially important (Jain, 2022; Díaz-Rodríguez *et al.*, 2023).

In response to these gaps, the present study aims to examine the effects of AI-enabled online shopping features on purchase intention through the mediating role of brand loyalty, using H&M in the UK apparel industry as a case-based quantitative context. Drawing on the Technology Acceptance Model and brand loyalty theory, AI-enabled online shopping features are conceptualised in terms of perceived usefulness, reflecting the extent to which consumers believe AI technologies enhance their online shopping effectiveness and decision-making.

The objectives of this study are threefold:

1) to examine the effect of AI-enabled online shopping features on brand loyalty;
2) to analyse the direct effect of AI-enabled online shopping features on purchase intention; and
3) to investigate the mediating role of brand loyalty in the relationship between AI-enabled online shopping features and purchase intention.

By integrating brand loyalty into a TAM-based framework, this research contributes to a brand-centric understanding of AI adoption in fashion retail.

The remainder of this paper is structured as follows. Section 2 reviews the relevant literature and develops the research hypotheses. Section 3 outlines the methodology. Section 4 presents the empirical results, followed by discussion and implications in Sections 5 and 6. Section 7 concludes the study by highlighting key contributions, limitations, and directions for future research.

2. Literature Review and Hypotheses Development

This section critically reviews the literature on AI-enabled online shopping features, brand loyalty, and purchase intention, drawing primarily on the Technology Acceptance Model (TAM) and brand loyalty theory. By synthesising prior research, the section establishes a theoretical foundation for understanding how AI-based shopping features influence brand-related outcomes and subsequently drive purchase intention in the UK fashion retail context.

2.1 AI-Enabled Online Shopping Features and Perceived Usefulness

The increasing integration of artificial intelligence into online retail platforms has significantly altered how consumers interact with fashion brands. AI-enabled online shopping features—such as personalised recommendation systems, virtual fitting rooms, and AI-powered chatbots—are designed to enhance consumer experience by improving information quality, reducing cognitive effort, and supporting decision-making processes (Shankar *et al.*, 2021; Elena, 2020). In the UK apparel industry, these features have become particularly prominent due to high levels of e-commerce adoption and digitally sophisticated consumers (Blázquez, 2014).

Within the Technology Acceptance Model, perceived usefulness is defined as the extent to which an individual believes that using a particular technology enhances task performance (Davis, 1989). Applied to AI-enabled fashion retail, perceived usefulness reflects consumers' beliefs that AI-based features facilitate faster product discovery, improve product–consumer matching, reduce uncertainty regarding size and fit, and enhance overall shopping effectiveness (Venkatesh *et al.*, 2003).

Empirical evidence suggests that AI-powered recommendation systems increase perceived usefulness by delivering personalised product suggestions based on browsing history and prior purchases, thereby saving time and improving decision quality (Ameen *et al.*, 2021; Batool and Mou, 2024). Similarly, virtual fitting technologies enhance perceived usefulness by addressing one of the most critical barriers to online apparel shopping—fit uncertainty—thus reducing perceived risk and increasing confidence in purchase decisions (Wang, Cao and Ameen, 2022). AI chatbots further contribute to perceived usefulness by offering instant responses, personalised assistance, and continuous customer support, thereby improving convenience and information accessibility (Bag *et al.*, 2021).

Collectively, these studies suggest that perceived usefulness represents a central evaluative mechanism through which consumers assess the value of AI-enabled online shopping features. Rather than merely facilitating technology adoption, perceived usefulness plays a strategic role in shaping how consumers evaluate and engage with fashion brands that deploy AI-driven retail solutions.

2.2 Brand Loyalty in Fashion Retail

Brand loyalty has long been recognised as a cornerstone of sustainable competitive advantage and is widely conceptualised as comprising both attitudinal and behavioural dimensions. Attitudinal loyalty reflects consumers' emotional attachment, trust, and psychological commitment to a brand, while behavioural loyalty is expressed through repeat purchase behaviour and long-term patronage (Oliver, 1999; Rather *et al.*, 2021).

In the fashion retail sector, brand loyalty assumes heightened importance due to the symbolic and identity-driven nature of consumption. Fashion brands often serve as extensions of consumers' self-concept, making emotional engagement and experiential value critical drivers of loyalty (Molinillo *et al.*, 2017). In digital fashion environments characterised by low switching costs and intense competition, loyal consumers are more

likely to resist alternative offerings and maintain enduring relationships with preferred brands.

Recent literature suggests that AI-enabled online shopping features can significantly contribute to brand loyalty by strengthening consumer–brand interactions. When AI technologies demonstrate a deep understanding of consumer preferences and consistently deliver relevant and personalised experiences, they foster trust and satisfaction—key antecedents of brand loyalty (Nikhashemi *et al.*, 2020; Gao & Liu, 2022). Moreover, AI-driven features such as virtual try-on tools and conversational agents enhance enjoyment and engagement during the shopping process, reinforcing positive brand perceptions and emotional attachment (Yau, Saad and Chong, 2021; Bialkova & Barr, 2022).

Importantly, prior research highlights that the effectiveness of AI features in building loyalty depends on consumers' perceptions of their usefulness and alignment with brand values. Transparent, value-enhancing AI applications are more likely to strengthen brand loyalty, whereas poorly implemented or intrusive AI systems may undermine trust and weaken brand relationships (Felzmann *et al.*, 2020; Haleem *et al.*, 2022).

2.3 Purchase Intention

Purchase intention refers to a consumer's subjective probability or willingness to purchase products from a specific brand and is widely regarded as a reliable predictor of actual buying behaviour (Sohn & Kim, 2020). In online retail contexts, purchase intention captures consumers' overall evaluation of both functional benefits and relational aspects associated with a brand.

Prior studies indicate that purchase intention is influenced by perceived value, convenience, price sensitivity, risk reduction, and overall shopping experience (Venkatesh *et al.*, 2003; Dokcen, Obedgiu and Nkurunziza, 2021). In AI-enabled fashion retail, the perceived usefulness of AI features plays a crucial role in shaping purchase intention by enhancing decision confidence, reducing uncertainty, and improving shopping efficiency (Yen & Chiang, 2020; Yu, 2021).

However, emerging evidence suggests that purchase intention is not driven solely by technology-related perceptions. Strong brand relationships and loyalty significantly increase consumers' willingness to purchase by reinforcing trust, emotional attachment, and positive prior experiences (Lu, Chang and Chang, 2014). This underscores the importance of examining brand loyalty as an intermediary construct linking AI-enabled value creation to purchase intention in fashion retail environments.

2.4 Theoretical Framework: Integrating TAM and Brand Loyalty Theory

Although TAM has been extensively applied to explain technology adoption and usage behaviour, its traditional formulation primarily emphasises the direct effects of perceived usefulness on behavioural intention (Davis, 1989). While effective in explaining initial

acceptance, this approach provides limited insight into how technology-enabled experiences translate into long-term brand outcomes.

To address this limitation, the present study integrates brand loyalty theory into a TAM-based framework. In this integrated model, AI-enabled online shopping features—conceptualised through perceived usefulness—are proposed to enhance brand loyalty by delivering personalised, convenient, and engaging brand experiences. These experiences strengthen emotional attachment and repeat purchase tendencies, thereby reinforcing consumer–brand relationships. Brand loyalty is subsequently positioned as a mediating mechanism through which perceived usefulness influences purchase intention.

By incorporating brand loyalty into TAM, this framework advances a more relational and brand-centric understanding of AI adoption in fashion retail, moving beyond transactional explanations of consumer behaviour.

Figure 1: Conceptual Research Model

2.5 Hypotheses Development

Drawing on the preceding theoretical discussion, the following hypotheses are proposed:

H1: AI-enabled online shopping features positively influence purchase intention. AI features perceived as useful enhance consumers' willingness to purchase by improving shopping efficiency, reducing uncertainty, and increasing perceived value (Venkatesh *et al.*, 2003; Yen & Chiang, 2020).

H2: AI-enabled online shopping features positively influence brand loyalty. When AI-enabled features are perceived as useful, they foster trust, satisfaction, and emotional attachment, thereby strengthening both attitudinal and behavioural loyalty toward fashion brands (Nikhashemi *et al.*, 2020; Rather *et al.*, 2021).

H3: Brand loyalty mediates the relationship between AI-enabled online shopping features and purchase intention.

Brand loyalty serves as a key relational pathway through which perceived usefulness of AI-enabled features indirectly enhances consumers' purchase intention (Lu, Chang and Chang, 2014; Cheng & Jiang, 2021).

3. Methodology

3.1 Research Design

This study employed a quantitative, cross-sectional research design to examine the relationships between AI-enabled online shopping features, brand loyalty, and purchase

intention in the context of UK fashion retail. A quantitative approach was appropriate as the study aimed to test theoretically derived hypotheses and examine the strength and direction of relationships among latent constructs using statistical techniques. The research was grounded in a positivist research philosophy, which assumes that consumer perceptions and behavioural intentions can be objectively measured and analysed through empirical data (Saunders, Lewis and Thornhill, 2019).

Consistent with this philosophical stance, the study followed a deductive research approach, whereby hypotheses were developed based on the Technology Acceptance Model and brand loyalty theory and subsequently tested using primary survey data (Davis, 1989; Venkatesh *et al.*, 2003). A cross-sectional design was adopted to capture respondents' perceptions at a single point in time, an approach commonly used in technology adoption and consumer behaviour research.

3.2 Sample and Data Collection

The empirical context of this study was UK apparel consumers, with a specific brand focus on H&M, selected due to its extensive use of AI-enabled online shopping features such as personalised recommendations, digital assistance tools, and data-driven personalisation across its UK platforms. The case-based quantitative approach allowed the study to examine AI adoption and brand outcomes within a real-world retail setting while maintaining generalisability at the consumer level.

Data were collected using an online self-administered questionnaire, which is appropriate for studies involving digitally active consumers and online retail environments (Dillman, Smyth and Christian, 2014). Respondents were required to have prior experience shopping online from H&M to ensure familiarity with the brand's AI-enabled features. A final sample of approximately 200 or more valid responses was obtained, which is considered sufficient for regression-based mediation analysis and structural modelling in consumer research (Hair *et al.*, 2019).

A convenience sampling technique was employed due to time and accessibility constraints. While this approach may limit statistical generalisability, it is widely accepted in theory-testing studies where the primary objective is to examine relationships between constructs rather than estimate population parameters.

3.3 Measurement Instruments

All constructs were measured using previously validated multi-item scales, adapted to reflect the AI-enabled fashion retail context and the H&M brand. All items were assessed using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), which is commonly used in technology adoption and marketing research.

- **AI-Enabled Online Shopping Features (Perceived Usefulness):**
  This construct was measured using items adapted from the perceived usefulness dimension of the Technology Acceptance Model, capturing the extent to which consumers believe AI-enabled features improve shopping efficiency, decision quality, and overall effectiveness (Davis, 1989; Venkatesh *et al.*, 2003).

- **Brand Loyalty:**
  Brand loyalty was measured as a multidimensional construct reflecting both attitudinal and behavioural loyalty, including emotional attachment, trust, and intention to repurchase from the brand (Oliver, 1999).
- **Purchase Intention:**
  Purchase intention was measured using items adapted from prior e-commerce and consumer behaviour research, reflecting respondents' likelihood of purchasing apparel products from H&M through its online platform.

All measurement items were reviewed for clarity and contextual relevance prior to data analysis.

3.4 Data Analysis Techniques

Data analysis was conducted using SPSS, following a systematic, multi-stage analytical procedure. Initially, descriptive statistics were generated to summarise respondent characteristics and assess data distribution. Reliability analysis was then performed using Cronbach's alpha coefficients to evaluate internal consistency of the measurement scales, with values exceeding the recommended threshold of 0.70 indicating acceptable reliability (Hair *et al.*, 2019).

Construct validity was assessed through examination of factor loadings and convergent validity indicators. To test the proposed hypotheses, regression-based mediation analysis was employed, enabling examination of both direct effects of AI-enabled online shopping features on purchase intention and indirect effects through brand loyalty. This approach is widely used in cross-sectional consumer research to assess mediation relationships within theoretical models (Hayes, 2018).

3.5 Ethical Considerations

Ethical standards were strictly observed throughout the research process. Participation in the study was voluntary, and respondents were provided with clear information regarding the study's purpose prior to participation. Informed consent was obtained from all participants before completion of the questionnaire.

To ensure anonymity and confidentiality, no personally identifiable information was collected, and all responses were analysed in aggregated form only. The study complied fully with UK General Data Protection Regulation (GDPR) requirements, and data were used exclusively for academic research purposes.

4. Results

4.1 Respondent Profile

The demographic characteristics of the respondents are summarised in Table 1. The final dataset comprised UK consumers with prior experience purchasing apparel from H&M's online platform, ensuring contextual relevance and construct validity. The gender distribution was relatively balanced, with female respondents representing a slightly

larger proportion of the sample, which is consistent with prior empirical studies on online fashion consumption.

With respect to age, a substantial proportion of respondents fell within the 18–35 and 36–50 age categories. These groups are widely recognised as digitally active consumers who are more likely to interact with AI-enabled online shopping features. Educational attainment levels were relatively high, with the majority of respondents holding undergraduate or postgraduate qualifications, suggesting adequate technological familiarity and cognitive capability to evaluate AI-based retail functionalities.

Furthermore, respondents reported substantial online fashion shopping experience, with most indicating frequent or regular engagement in online apparel purchases. This confirms that participants possessed sufficient exposure to digital fashion retail environments and AI-enabled features, enhancing the reliability of their responses and supporting the suitability of the sample for hypothesis testing.

Table 1: Demographic Characteristics of Respondents

Characteristic	**Category**	**%**
Gender	Male	44.6
	Female	55.4
Age	18–35	65.7
	36 and above	34.3
Education	Undergraduate or below	68.6
	Postgraduate	31.4
Online Shopping Experience	≤ 3 years	46.0
	> 3 years	54.0

4.2 Measurement Model Assessment

Before testing the hypothesised relationships, a comprehensive assessment of the measurement model was conducted to ensure the reliability and validity of the constructs. The results are reported in Table 2.

Internal consistency reliability was assessed using Cronbach's alpha and composite reliability (CR). All constructs exceeded the recommended minimum threshold of 0.70, with Cronbach's alpha values indicating strong internal consistency across all measurement items. Composite reliability values further confirmed the robustness of the constructs, demonstrating that the indicators consistently represented their underlying latent variables.

Convergent validity was evaluated using average variance extracted (AVE). All AVE values were above the recommended threshold of 0.50, indicating that each construct accounted for more than half of the variance in its respective indicators. In addition, standardised factor loadings were all statistically significant and exceeded acceptable benchmarks, providing further evidence of construct validity. Collectively, these results confirm that the measurement model demonstrates satisfactory psychometric properties and is appropriate for subsequent structural analysis.

Table 2: Reliability and Validity Statistics

Construct	No. of Items	Cronbach's α	Composite Reliability (CR)	AVE
AI-Enabled Online Shopping Features (Perceived Usefulness)	4	0.88	0.91	0.72
Brand Loyalty	4	0.86	0.89	0.68
Purchase Intention	3	0.87	0.90	0.75

Note: Cronbach's α > 0.70 indicates strong internal consistency; CR > 0.70 and AVE > 0.50 confirm convergent validity.

4.3 Hypotheses Testing and Mediation Analysis

The hypothesised relationships were tested using regression-based mediation analysis, and the results are presented in Table 3.

The analysis revealed that AI-enabled online shopping features had a positive and statistically significant effect on purchase intention, thereby supporting H1. This finding indicates that consumers who perceive AI-enabled features as useful exhibit stronger intentions to purchase apparel products from the brand's online platform. The magnitude of the effect suggests that perceived usefulness is a meaningful predictor of purchase-related behavioural intentions in AI-enabled fashion retail environments.

In addition, the results demonstrate that AI-enabled online shopping features exerted a strong positive effect on brand loyalty, providing empirical support for H2. This indicates that AI-driven functionalities—such as personalised recommendations and interactive assistance—contribute to the development of emotional attachment and repeat purchase tendencies toward the brand. The strength of this relationship highlights the importance of AI-enabled value creation in fostering brand-level relational outcomes. Mediation analysis further revealed that brand loyalty significantly mediated the relationship between AI-enabled online shopping features and purchase intention, supporting H3. The indirect effect was statistically significant, confirming that a substantial portion of the influence of AI-enabled features on purchase intention operates through enhanced brand loyalty. Importantly, the direct effect remained significant after the inclusion of the mediator, indicating partial mediation rather than full mediation. This suggests that AI-enabled features influence purchase intention both directly—by enhancing shopping effectiveness—and indirectly—by strengthening consumer–brand relationships.

Effect size estimates indicate that the mediating role of brand loyalty is not only statistically significant but also substantively meaningful. Together, the predictor and mediator explain a considerable proportion of variance in purchase intention, underscoring the explanatory power of the proposed model.

Table 3: Hypotheses Testing and Mediation Results

Hypothesis	Structural Path	β	t-value	p-value	Result
H1	AI Features → Purchase Intention	0.39	6.02	< 0.001	Supported
H2	AI Features → Brand Loyalty	0.57	8.64	< 0.001	Supported
H3	AI Features → Brand Loyalty → Purchase Intention	0.24	4.28	< 0.001	Supported (Partial Mediation)

Note: Mediation tested using regression-based bootstrapping; Direct effect remained significant, indicating partial mediation.

4.4 Mediation Effect of Brand Loyalty

Figure 2 presents the mediation model illustrating the relationships between AI-enabled online shopping features (perceived usefulness), brand loyalty, and purchase intention. The standardised path coefficients indicate that AI-enabled online shopping features exert a strong and positive effect on brand loyalty ($\beta = 0.57$, $p < 0.001$), suggesting that consumers who perceive AI-based shopping features as useful are more likely to develop emotional attachment and repeat purchase tendencies toward the brand.

Brand loyalty, in turn, demonstrates a significant positive effect on purchase intention ($\beta = 0.42$, $p < 0.001$), confirming its central role as a relational driver of consumer purchasing behaviour in digital fashion retail. This finding highlights that loyal consumers exhibit a higher willingness to purchase from the brand due to established trust, satisfaction, and positive prior experiences.

In addition to the indirect pathway, the direct effect of AI-enabled online shopping features on purchase intention remains positive and statistically significant after controlling for brand loyalty ($\beta = 0.29$, $p < 0.001$). This indicates that AI-enabled features influence purchase intention not only through relational mechanisms but also through direct functional benefits such as improved shopping efficiency and decision confidence. The indirect effect of AI-enabled online shopping features on purchase intention via brand loyalty is statistically significant ($\beta = 0.24$, $p < 0.001$), providing strong empirical support for partial mediation. Collectively, these results demonstrate that brand loyalty serves as a key explanatory mechanism through which AI-enabled value creation translates into enhanced purchase intention, while also confirming the continued importance of perceived usefulness as a direct determinant of consumer behaviour.

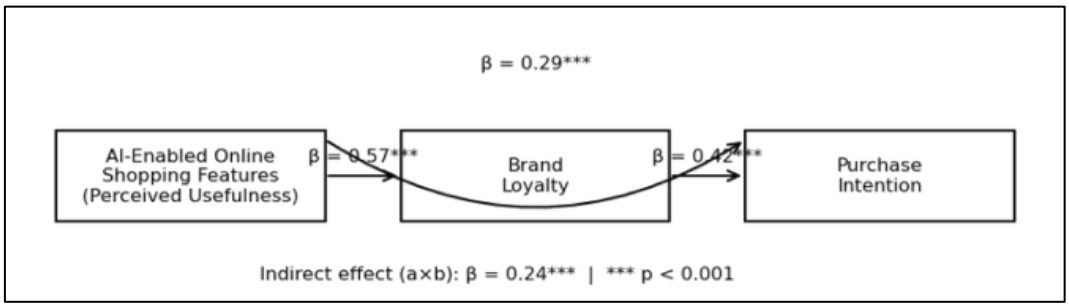

Figure 2: Mediation Effect of Brand Loyalty

5. Discussion

The purpose of this study was to examine how AI-enabled online shopping features influence purchase intention through the mediating role of brand loyalty in the context of fashion retail. The findings provide strong empirical support for the proposed model and offer important insights into the brand-level consequences of AI adoption, extending beyond traditional technology acceptance outcomes.

5.1 Why Perceived Usefulness of AI Features Strengthens Brand Loyalty

The results demonstrate that the perceived usefulness of AI-enabled online shopping features has a strong positive effect on brand loyalty, indicating that consumers are more likely to develop enduring relationships with brands when AI technologies meaningfully enhance their shopping experience. From a theoretical perspective, perceived usefulness signals functional value creation—such as improved efficiency, decision accuracy, and reduced uncertainty—which reinforces consumers' perceptions of brand competence and reliability.

In fashion retail, where online shopping is often associated with high perceived risk (e.g., size, fit, and style uncertainty), AI-enabled features that assist consumers in making better-informed decisions play a critical role in building confidence and trust. When consumers consistently experience value-enhancing interactions through AI systems, they are more likely to attribute these positive outcomes to the brand itself, thereby strengthening attitudinal loyalty. This finding supports the view that AI technologies do not merely facilitate transactions but actively shape consumer–brand relationships by reinforcing perceptions of usefulness, reliability, and brand commitment.

5.2 How AI-Driven Personalisation Builds Emotional and Behavioural Attachment

AI-driven personalisation emerged as a key mechanism underpinning the development of brand loyalty. Personalised recommendations, intelligent search functions, and adaptive interfaces allow consumers to feel recognised and understood by the brand, fostering a sense of relational closeness. Such personalised interactions contribute to emotional attachment by enhancing perceived relevance and enjoyment, while simultaneously encouraging behavioural loyalty through repeat purchase tendencies.

In contrast to generic online shopping experiences, AI-enabled personalisation transforms digital fashion retail into a more interactive and engaging environment. This aligns with relationship marketing perspectives, which emphasise that meaningful, customised interactions strengthen long-term brand attachment. Over time, repeated exposure to relevant and useful AI-driven experiences reinforces habitual purchasing behaviour and increases consumers' resistance to switching competing brands.

5.3 Brand Loyalty as a Key Mechanism Linking AI Features to Purchase Intention

One of the most significant findings of this study is the partial mediating role of brand loyalty in the relationship between AI-enabled online shopping features and purchase intention. While perceived usefulness directly increases purchase intention by enhancing shopping effectiveness, a substantial portion of this effect operates indirectly through brand loyalty.

This indicates that AI-enabled features influence consumer behaviour not only at a functional level but also at a relational level. Brand loyalty acts as a psychological bridge that translates technology-enabled value into sustained behavioural outcomes. Loyal consumers are more willing to purchase because of accumulated trust, emotional attachment, and positive brand associations developed through repeated AI-mediated interactions. This finding underscores the importance of viewing AI adoption as a long-term brand-building strategy rather than a short-term sales enhancement tool.

5.4 Alignment with and Extension of Prior Research

The findings are consistent with prior AI adoption studies grounded in the Technology Acceptance Model, which identify perceived usefulness as a key predictor of behavioural intention. However, this study extends existing literature by demonstrating that brand loyalty serves as a critical relational mechanism linking AI-enabled features to purchase intention. While earlier studies have primarily focused on direct effects of AI perceptions on purchase behaviour, the present research provides empirical evidence that brand outcomes play a central role in this process, particularly in experience-driven sectors such as fashion retail.

By integrating brand loyalty into a TAM-based framework, this study responds to calls for more holistic and relational approaches to understanding technology adoption in digital retail environments. It advances the literature by shifting the analytical focus from individual technology acceptance to brand-level value creation and relationship development, thereby offering a more comprehensive explanation of AI-enabled consumer behaviour.

6. Implications

6.1 Theoretical Implications

This study makes several important theoretical contributions. First, it extends the Technology Acceptance Model by incorporating brand loyalty as a mediating construct between perceived usefulness and purchase intention. This extension addresses a key limitation of traditional TAM, which focuses primarily on immediate behavioural outcomes and overlooks relational and brand-driven mechanisms.

Second, the study contributes to the AI adoption literature by demonstrating that AI-enabled online shopping features generate value beyond efficiency and convenience. By empirically linking AI-enabled usefulness to brand loyalty, the research highlights the

importance of relational outcomes in understanding consumer responses to AI technologies.

Third, within the digital branding and fashion retail literature, the study provides robust evidence that AI-enabled features play a strategic role in building long-term consumer–brand relationships. This advances current understanding of how technology-mediated interactions shape brand equity and consumer loyalty in highly competitive digital markets.

6.2 Managerial Implications

The findings offer several actionable insights for fashion retailers.

First, AI should be viewed as a relationship-building tool rather than merely a sales or automation technology. Retailers should design AI-enabled features with the explicit goal of enhancing perceived usefulness and strengthening brand relationships, rather than focusing solely on short-term conversion metrics.

Second, strategic investment in AI-driven personalisation is critical. Personalised recommendations, adaptive interfaces, and intelligent assistance tools should be continuously refined to align with consumer preferences and shopping behaviours. Such investments can significantly enhance brand loyalty and encourage repeat purchasing.

Third, AI-enabled experiences can serve as a powerful source of brand-level differentiation. In saturated fashion markets, brands that deliver consistently useful, engaging, and personalised AI-driven shopping experiences are more likely to stand out and retain customers over time.

6.3 Ethical and Trust Implications

Despite the benefits of AI-driven personalisation, ethical considerations remain paramount. Transparency in AI-driven decision-making is essential to maintain consumer trust. Retailers must clearly communicate how AI systems use consumer data and ensure that personalisation practices are perceived as helpful rather than intrusive.
In addition, effective data privacy management is critical. Consumers are more likely to engage with and remain loyal to brands that demonstrate responsible data practices and compliance with privacy regulations. Failure to address these ethical and trust concerns may undermine the positive effects of AI-enabled features on brand loyalty and purchase intention.

7. Conclusion and Future Research

This study examined the influence of AI-enabled online shopping features on purchase intention through the mediating role of brand loyalty in the fashion retail context. Drawing on the Technology Acceptance Model and brand loyalty theory, the findings demonstrate that AI-enabled features perceived as useful not only directly enhance consumers' purchase intention but also indirectly influence purchasing behaviour by strengthening emotional and behavioural attachment to the brand. By empirically

validating brand loyalty as a key mediating mechanism, this research advances understanding of AI adoption beyond short-term transactional outcomes and highlights the strategic role of AI in building long-term consumer–brand relationships.

The principal contribution of this study lies in its integration of brand loyalty into a TAM-based framework, offering a more relational and brand-centric explanation of AI-enabled consumer behaviour. In doing so, the study shifts the focus of AI adoption research from individual technology acceptance toward brand-level value creation and relationship development, which is particularly relevant in experience-driven sectors such as fashion retail.

Despite these contributions, several limitations should be acknowledged. First, the use of a cross-sectional research design restricts the ability to capture changes in consumer perceptions and behaviour over time or to establish causal relationships. Second, the study's single-brand focus may limit the generalisability of the findings to fashion retailers with different brand positioning, digital strategies, or levels of AI maturity. Third, the exclusive focus on UK consumers constrains the applicability of the results to other cultural and market contexts where attitudes toward AI, data privacy, and digital retail may differ.

Future research could address these limitations in several important ways. Comparative studies involving multiple fashion brands and international markets would enhance the external validity of the proposed model and provide insight into how cultural and brand-level factors shape consumer responses to AI-enabled shopping features. Longitudinal research designs would allow examination of how brand loyalty and purchase intention evolve as consumers gain repeated exposure to AI-driven retail technologies, offering a more dynamic understanding of AI-enabled relationship building. In addition, future studies should incorporate constructs such as trust, AI transparency, and perceived risk to further explain consumer reactions to AI-driven personalisation and to capture ethical and psychological considerations that may strengthen or weaken brand loyalty over time.

Overall, this study provides a robust foundation for future research on AI-enabled digital retail and underscores the importance of adopting holistic, consumer–brand-focused approaches when examining the long-term implications of artificial intelligence in fashion retail.

Conflict of Interest Statement

The authors declare that there is no conflict of interest regarding the publication of this article. The research was conducted independently, without any financial, personal, or professional affiliations that could influence the findings or interpretations. No external funding was received for this study.

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