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Abstract

This study examines the role of AI in the UK fashion industry. A research approach identifies key trends, benefits, and challenges in the adoption of AI by surveying 200 stakeholders, including industry professionals. AI implementation is provided with consumer involvement. The findings suggest that technologies used by AI include chatbots, virtual stylists, and personalized recommendations. These major barriers to widespread adoption that provide consumers their participation and satisfaction are greatly increased by ethical concerns such as data privacy, transparent algorithms, and compliance.

This study supports earlier research which shows that AI has a positive impact on retail, and also highlights the differences in the challenges faced by small and medium-sized enterprises (SMEs). By the implementing AI in particular recommendation strong strategies for continued integration, transparency and ethical AI practices illuminate. The UK fashion industry can address these limitations and fully harness AI's potential to drive innovation and sustainable success.

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Chapter 1: Introduction

1.1 Background:

Artificial Intelligence (AI) has come close to a revolution in many sectors taking the ability to transform processes, decisions, and customer relations. According to the study of Markauskaite et al., (2022), Artificial intelligence involves the use of computational technologies to enable machines to learn, reason, and correct themselves (Markauskaite et al., 2022). Its uses encompass a broad range of fields like healthcare, finance, manufacturing, and retail sectors since it provides capabilities to process and analyze big datasets and get the result as actionable intelligence.

In recent years, the use of artificial intelligence in fashion industries has gained popularity in the UK. In this research, the UK fashion industries have reinvented how business ventures provide customers with personalized services (Saunders, 2016). In the case of AI, the UK is a prime candidate for investigation due to its preeminence in fashion and creativity. When used in customer service personalization involves attending to each client's needs and presenting products and services that will suit their requirements. According to the study of Tomczyk et al., (2022) the deep level of personalization creates the needed intimacy and ensures that the customers keep repeating the same business with the dealer/company (Tomczyk et al., 2022). Machine Learning, NLP, and predictive analytics have changed a company's thinking about personalization. For example, virtual fitting rooms such as ASOS, a fashion retailer have a virtual fitting solution that applies the technique and provides clients with a similar shopping experience but online.

The importance of using artificial intelligence in the process of personalization can be further explained through the expectations of consumers. McKinsey in its report (2021) stated that 71% of customers want companies to deliver personalization and companies that do so enjoy a 10-15% boost in their revenue. By the study of Gazzola et al., (2020) the fashion sector in the UK strongly influences the economy generating nearly £29 billion per year (Gazzola et al., 2020). Here, the element of competition is fiercely intense and the use of AI for personalization is crucial. However, along with benefits using AI elements in customer service has its pitfalls. Near data acquisition, processing, analysis, and utilization questions like data privacy the existence of algorithmic bias, and ethics of data use arise concerning AI systems customer data. A discussion of the barriers outlined shows that the UK fashion sector remains challenging for small to medium-sized enterprises. By the study of Li et al., (2024) this research aims to reveal and analyze the opportunities, risks and ethical issues of using personalization based on Artificial Intelligence (Li et al., 2024). The role it is likely to play in the further development of the fashion industry in the UK.

1.2 Research Rationale (problem statement)

AI has continued to grow quickly, disrupting business environments worldwide and helping organizations adapt to new customers' needs. The literature review revealed that industries such as healthcare and the financial sector have well-covered studies about the effectiveness of AI but little has been studied about its application to the fashion industry, particularly the effectiveness of personally tailored clothing (Agarwal, Swami and Malhotra, 2022).

The ability of AI to deliver hyper-personalized experiences provides competitive benefits for business organizations. For instance, personalization helps with customer satisfaction, brand loyalty, and revenue growth. However, the UK fashion industry has some prospects associated with the introduction of AI Personalization.

Specific issues include:

- **Ethical Concerns:** The large volumes of customer data used by AI systems present problems of privacy, security, and information disclosure. Most customers have no idea how their information is gathered and utilized, which can cause distrust.
- **Algorithmic Biases:** This may cause biases within AI algorithms to influence decision-making and result in discrimination or poor personalization results. For example, recommendation engines designed from biased datasets can fail to recognize customers' different needs.
- **High Implementation Costs:** AI adoption may involve the spending of large sums of capital on technology and physical and human resources. This makes the large companies benefit more while the SMEs have locked out of the benefits of embracing Artificial Intelligence.

According to the study of Noor et al., (2021) AI in the fashion industry has been explored mainly in terms of technology and functionality through an emphasis on areas such as fashion design and supply chain management (Noor et al., 2021). However, a lack of literature that focuses on how AI can be used in the context of personalized customer service. The exact involvement of AI in enabling the personalization of customer service has been given relatively scant attention in the academic literature. By the study of Kronemann et al., (2023) this research aims to fill this gap by exploring the risks and advantages of personalized AI among different users in the UK (Kronemann et al., 2023). This study adopts a qualitative research strategy to offer practical implications for fashion retailers, policymakers, and technology suppliers. This research feeds into a rapidly expanding literature base of business AI implementation with suggestions for ethical customer service AI applications.

1.3 Research Aims and Objectives

This study aims to the transformational impact of artificial intelligence (AI) on customer service personalization in the UK apparel industry. This study seeks to investigate the impact of AI on customer experience through simulated service preference and emphasizes its potential to increase engagement satisfaction and loyalty.

- To assess the impact of AI on enhancing personalization in customer service in the UK fashion industry.
- To review the benefits and challenges of AI-driven optimization in this area.
- To assess the ethical and legal implications of using AI in improving customer service.
- To integrate AI into customer service practices effectively and ethically.

1.4 Research Questions

To achieve the research objectives the following questions guide the study:

- i. What does AI have an impact on personalized customer service in the UK fashion industry?
- ii. What are the main advantages and barriers associated with AI-powered personalization?
- iii. What strategies can organizations use to address ethical and legal issues integrating AI into customer service?
- iv. What strategies can stakeholders take to ensure the sustainable integration of AI into the UK fashion industry?

1.5 A Summary of Key Literature Reviewed

The literature review focuses on the increasing role of AI in business change with customer service as a key element of personalization. According to the study of Holmlund et al., (2020), big data analysis gives AI applications a call to help business organizations understand customers' preferences for a customized experience (Holmlund et al., 2020). For instance, AI algorithms arrange data from online purchases social media usage history, and online shopping history to come awake with customized product suggestions. The empirical literature also highlights how AI innovations in virtual fitting rooms and chatbots can revolutionize. Tele-styling and virtual fitting rooms all backed up by AR and AI make customers' shopping even more comfortable since they can see how a specific piece of clothing will look and fit. AI chatbot gives instant and customized answers to customers' questions hence increasing satisfaction and customer engagement.

There are some gaps: ethical issues are still quite ignored in the theory. According to the study by Pranta et al., (2024) the increasing concern among consumers for ethical AI practices in collecting and using data in the application(Pranta et al., 2024). Furthermore, many unknowns concerning how SMEs can successfully utilize AI despite possible resource deficiencies. To do this, this research combines these views to present an integrated approach to comprehending AI's role in the personalization of customer service.

1.6 Summary of Research Methodology

The research method used in this study is qualitative with an interpretivist paradigm. The survey data is collected from fashion industry participants in the United Kingdom including designers, marketing specialists, AI technology developers, and customers. The purposive sampling technique is used to identify participants with the knowledge and experience to respond to the questionnaires. In data collection, the semi-structured allow the researcher to gather vast amounts of descriptive data about participants. Thematic analysis is applied to extract repeating patterns and prevent analysis from diverting from research objectives. It allows for a methodological examination of personalization from the technical and ethical perspectives in conjunction with AI.

1.7 Dissertation Structure

The dissertation is structured as follows:

Chapter 1: Introduction

Introduces the research in terms of background, justification, purpose, goals, and questions. It also provides a dissertation template and provides an overview of literature and methods.

Chapter 2: Literature Review

Discusses theories, models, and available literature on the application of artificial intelligence and personalization in customer services. It reviews the existing literature to establish voids and sets the background of the study.

Chapter 3: Methodology

Outlines the research philosophy, approach, method, sampling procedure, data collection, and data analysis procedures. It also responds to the issue of ethical implications.

Chapter 4: Findings and Discussion

Identifies primary data gathered during the research. It relates conclusions to the research questions and explains their significance in practice and theory.

Chapter 5: Conclusion

These arguments that conclusions and recommendations can be made. The principal results offer detailed recommendations for policymakers and other interested parties while pointing out potential topics for further investigation.

Chapter 2: Literature Review

2.1 Introduction

This research aims to establish a review of the literature about Artificial Intelligence (AI) and its impedance on the fashion industry having demonstrated the concentration on the United Kingdom. The idea of AI has steadily gained much attention, especially for its role in transforming organizations' operations through improving customers' experiences. According to the study of Spanakis et al., (2016) technology promises to be an innovation growth agent a way to introduce personalization strategies for targeting customer's individual needs and behaviors (Spanakis et al., 2016). The implications of AI application to customer services thus the advantages, disadvantages, and ethical considerations of fashion industries' adoption of technology are expounded based on the various theoretical frameworks models, and available data. The existing literature on AI in business revolves around topics such as automation, design, and supply chain. However, little work has been done to discuss its role in personalization for customer service. By the study by Todeschini et al., (2019) this gap is especially apparent in the UK fashion industry is highly dynamic competitive, constantly evolving, and innovative (Todeschini et al., 2019). The study elucidates areas of research gaps in the extant evidence pointing toward the potential future development of AI and the need for this research to investigate the extent and nature of pro-active personalization in UK fashion businesses.

2.2 Definitions and Key Concepts

2.2.1 Defining Artificial Intelligence (AI):

According to the study of Jarrahi, (2018) AI is the capability of a machine, particularly a computer, to mimic human intelligence (Jarrahi, 2018). Knowledge processes involve the acquisition or obtaining of data and knowledge for processing as well as rules of using them, processing or using them, and using feedback information for improvement. AI is used in decision-making processes, customer interactions, and individualized marketing strategies of business organizations. According to the study of Rane et al., (2024), AI extends to the automation of processes the means of predictive analysis, and the generation of new insights from large datasets which in turn gives the company a competitive advantage (Rane et al., 2024). Deep learning is numerous and cuts across every industry and organization such as artificial personal assistants, bots machine learning models, and recommendation systems. These technologies have changed the ways companies deal with customers and customers deal with companies by providing them with more individualized, more immediate, and much smoother customer experiences.

2.2.2 Personalization of Customer Services:

According to the study by Anshari et al., (2019), Personalization is about delivering products, services, and messages relevant to particular clients, using the data on their behaviors or previous communication with the respective enterprise (Anshari et al., 2019). AI further extends personalization through the accumulation of big customer data such

as it identifies expected behaviors and administers extraordinarily relevant experiences. Sun et al., (2021) have described how personalization is now a critical feature of the service sector, including retail, fashion, and hospitality industries. Based on the examples of the fashion industry, personalization can be of many types such as recommendation systems, targeted or segmented communication messages, personalized retailing, and personalized garments. By the study of Bao et al., (2015) the information concerning the customer's previous purchases, the links visited, and their social media profiles to give recommendations (Bao et al., 2015). Predictive analytics take it a step further and foresee future preferences meaning businesses can target customers before these customers have made a purchase decision. Personalization is not only about developing adaptive products but also providing an interesting shopping experience at every step. The smooth implementation of such AI-based personalization options is crucial in the customer journey hence their impact in making the option as seen to be value-added and smart.

2.3 Theories and Frameworks

2.3.1 Big Data Analytics and Personalization:

Personalization is one of the most crucial areas linked with AI techniques and big data analytics. Big data technology is used in AI systems since they are assumed to realize high-speed analysis of large data volumes to identify patterns that would be beneficial in shaping the approach toward individual clients. According to a study by Pousttchi and Dehnert, (2018), there is the potential to transform 'Customer 2020' insight from perspective, patterns of communication, and customer profiles as well as transaction histories (Pousttchi and Dehnert, 2018). For example, data analysis is an effective tool for determining which shade models or trends are suitable for the selected population in fashion retail thus helping to avoid the acquisition of much unsuitable inventory. One of the most famous real-use cases of big data analytics is recommendation engines familiar to anyone who has used e-commerce platforms. By the study of Jayaram, Manrai, and Manrai, (2015) these engines use aspects such as past data, website data, and experience of social media and display products belonging to a particular line to the customer (Jayaram, Manrai, and Manrai, 2015). For example, Amazon targets its customers using data analysis from its customer's browsing and purchase history, which is the main driver of its sales. Big data analytics, the ability to make meaning out of large quantities of data from various sources gives businesses a live picture of consumer trends hence providing consumer services tailored to an individual consumer.

2.3.2 Generative Adversarial Networks (GANs):

In today's fashion industry, the application of Generative Adversarial Networks (GANs) has been a breakthrough by allowing the production of bespoke designs using consumer data. GANs consist of two deep neural networks: a generator and a discriminator which conflict with each other and aim to create realistic images or designs from the raw data. These models have been applied in fashion design to provide the designer with a picture of what fashion designs. They could develop out of their customers' input a creative outlet with a touch of parameter estimation. By the study of Tripathi et al., (2022) GANs study giant volumes of data originating from consumers' preferences and purchasing history

to develop design solutions that represent customers' preferences and wants (Tripathi et al., 2022). In the fashion industry context, this technology could be used to create individualized garments, accessories and even advertising images relating to certain demographic types. Brands can create products that mean something to their clients which means GANs open great opportunities for highly personalized shopping experiences.

2.3.3 Customer Journey Mapping:

Customer journey mapping or customer mapping refers to a technique used by organizations to plan and design the multiple interactions customers may have with an organization. This mapping enriched with AI reveals the places in the customer journey where the business achieves the greatest improvements by focusing on personalization. According to the study by Nguyen, (2024), the virtual fitting rooms and robotic chatbots customer experience and satisfaction incredibly improved and loyalty has also skyrocketed (Nguyen, 2024). AI technologies enable multi-way communication between customers and brands through a low level of customer effort. The integration of AI services into the map of the customer journey identification allows for calculating and satisfying customer expectations throughout various contacts. By the study of Haleem et al., (2022) AI-controlled recommendation systems can predict the next steps in a customer's journey, suggest some product, or provide a promotion at the right time (Haleem et al., 2022). This is another advantage of AI that involves treating the customers in the best way possible before, during, and after they engage with the brand.

2.4 Empirical Research on AI and Customer Service

2.4.1 AI in Enhancing Customer Experiences:

AI finds literary evidence to support the proposition that AI can deliver customized customer service outcomes. The study by Yeo et al., (2022) looked at the impact of AI on the fashion retail sector, and distinct attention was paid to the notion of the efficacy of predictive analytics and customer satisfaction since they remain preferred producers of product recommendations (Yeo et al., 2022). For instance, many online shops like the ASOS firm have embraced the application of AI in decision-making within their shops which enhances the online consumers' experience by suggesting items that a client would prefer to purchase to inject fewer decision-making mistakes and help boost the sale of products. According to the study by George et al., (2022) road of customer loyalty through dynamic pricing and promotions (George et al., 2022). He noted that AI algorithms analyze a customer's purchasing behavior to determine what offer is likely to be attractive while at the same time being profitable enough for the firm to make. The promoted products or services are beneficial to customers through targeted marketing while bringing the most profits to businesses.

2.4.2 Challenges in Implementing AI for Personalization:

The application of AI has significant benefits the nature of its application has some problems. According to the study by Bleier, Goldfarb, and Tucker, (2020), problems like data privacy and the algorithms that may be used to manipulate personalization information may adversely affect consumer trust (Bleier, Goldfarb, and Tucker, 2020). AI systems pose a data privacy concern due to their reliance on extensive customer data. Personal information may be

misused or used for other unapproved purposes. Fashion and other industries, where consumer preferences are expressed online, were particularly vulnerable to such disruption. The study of Ali and Choi, (2020) pointed out the threat of high costs as a key drawback of AI integration (Ali and Choi, 2020). Integrating AI technologies may also involve substantial amounts of capital in technology hardware, software applications, and qualified personnel. To the small and medium-sized enterprises in the fashion industry, these are costly, and often the firms are unable to afford and hence locked out of the benefits of AI personalized ordering. This has a segregation effect on the large resource endowment firms and constrains AI's disruptive impact on the rest of the businesses.

2.4.3 Ethical Considerations:

This is an important feature of the presented literature as ethical issues in AI. Consumers are no longer oblivious to how their information is being utilized and therefore are demanding higher levels of corporate propriety. The major problems associated with these systems are privacy infringement, biased algorithms, and non-informed data harvesting from the customer. AI technologies also affect the environment. According to the study Petrasch, (2022) states that AI consumes a lot of energy as seen in the fashion industries and its affairs use many algorithms to work on countless data (Petrasch, 2022). Through such opportunities, AI essentially provides options for minimizing wastage and increasing productivity has the potential to cause environmental harm if not controlled. This study shows that sustainability needs to form the basis for AI practice since harnessing the advantages of AI does not have to harm the environment.

2.5 AI in the UK Fashion Industry

2.5.1 Applications of AI in Fashion:

The fashion industry of the United Kingdom is showing a great interest in adopting AI in several instances including the designing process and several service fields. By the study of Kautish et al., (2023) the virtual fitting rooms introduced by companies such as ASOS and Thread allow shoppers to use artificial intelligence to get the real feel of shopping in-store (Kautish et al., 2023). Such tools enable the customer to appreciate how a particular cloth material and or a piece of clothing will fit and look when worn by the consumer thus providing improved convenience and minimizing the number of returns. In the same way, natural language processing (NLP) chatbots offer round-the-clock customer service and respond to demands in real-time with customized suggestions of previous orders and site visits made. AI's contribution to supply chain optimization can also not go unnoticed. Using the data that customers provide, AI can anticipate customers' needs and manage inventory and stock to provide customers with the products. It also enhances analytical functionality by giving businesses, the ability to predict precisely what products, services, or even promotional products to stock up to meet customer demand.

2.5.2 Benefits of AI-Driven Personalization:

This study demonstrates that AI brings several advantages to optimize and enhance the customers in the fashion business. According to the study of Mani, (2024) the reported that with the application of artificial intelligence to the

conception of adapted customer experiences, overall retention rates can be boosted from 10% to 30%(Mani, 2024). This is true primarily because an AI system can provide product recommendations/promotions for the customer. This means marketing messages sent to customers such as emails or push notifications are also sent based on the customer's interests. According to the study Rane, (2023) AI strengthens customer loyalty by delivering reliable and relevant experiences across all touchpoints (Rane, 2023). The brand satisfies the interests of customers and preferences making them more likely to buy from that brand again. In addition to providing customer delight, AI-enabled personalization strengthens the relationship between customers and brands.

2.5.3 Challenges Specific to the UK Fashion Industry:

According to the study of Zhao and Kim, (2021) these changes may seem they present unique problems for the fashion industry in the United Kingdom (Zhao and Kim, 2021). The high cost of adoption is a major concern because it can put many companies out of business, especially those that are underperforming. Even with the recent introduction of GDPR, there are still many questions about data privacy. The adaptation of AI systems must partially meet the data protection laws which creates a need for consistent legal and technical investment. According to the study of Errida and Lotfi, (2021) the lack of change management is another challenge that most organizations encounter (Errida and Lotfi, 2021). Some of the problems that many conventional fashion retailers face involve reluctance to implement AI resulting from perceived risks related to new technology. A downside to AI integration is the reluctance to upset customers by changing the experience they receive or eliminating the possibility of broadcasting their commands to a machine. The frequency of technology innovation indicates that organizations have to spend their money frequently to update their technologies to meet new market demands which may exert some pressure on the financial position of the firm.

2.6 Comparing and Contrasting Theories and Empirical Studies

2.6.1 The Role of Data Analytics:

The existing literature provides support for the fact that data analysis is a key determinant of AI personalization. While Sun et al. (2021) support the use of big data for transparency other authors like Pookulangara & Shephard (2013) call for big data security rearwards to privacy. This shows that conflict with the views expressed above means that businesses can provide personalized experiences to customers while at the same time being mindful of data management.

2.6.2 Ethical and Regulatory Challenges:

AI has not only an impressive number of advantages but also brings several ethical challenges. According to the study of Ramos et al., (2023) the mentioned how AI can be useful in reducing waste and enhancing sustainability (Ramos et al., 2023). It has extended his view that AI bears environmental costs. The discourse surrounding artificial intelligence (AI) in the fashion industry has focused on fears about environmental consequences and the anticipated intrusion of government regulation into the industry.

2.7.2 Gaps in Research:

Research provides greater insight into the role of AI in personal product development such as there is still a difference: The continued impact of AI on consumer trust and brand loyalty. Effective AI personalization strategies for small and medium-sized companies in the UK fashion industry. A comprehensive framework for addressing ethical and legal challenges in implementing AI.

Despite extensive research into the impact of AI on personal tailoring in the UK fashion industry, many issues remain unresolved. By the study of Holmström and Larsson, (2024) the impact of AI-powered personalization on consumer trust and brand loyalty has not been thoroughly explored (Holmström and Larsson, 2024). The lack of research on the impact of the use of AI on customer relationships and attitudes is a particular problem in the competitive apparel industry. The lack of knowledge about how individual AI strategies work is effective for SMEs as most research focuses on sizes fashion accessories. Medium-sized enterprises with limited resources face unique constraints that may prevent them from fully embracing AI and its potential benefits. A comprehensive model addressing the legal and ethical challenges associated with AI adoption there is no solution to the problem. To ensure that AI optimization techniques comply with ethical standards and regulatory mandates research concerns such as data privacy algorithmic bias and transparency. The study focused on overcoming these shortcomings the role is critical to the growth of the business.

2.7 Literature Gap

This review identifies major shortcomings in the current literature:

Insufficient research on the role of AI in aligning personalization with ethical issues in the fashion industry. There has been insufficient research on the challenges faced by SMEs in implementing AI technologies. Insufficient attention was paid to the unique legal and ethical framework of the UK fashion industry, particularly GDPR compliance.

According to the study of Babu et al., (2022) it has identified several important shortcomings in the existing literature on AI personalization in the fashion industry (Babu et al., 2022). The research into how AI can provide the balance between delivering personalized customer experiences and ethical use of their data is still in its nascent stages. Although personal engagement enhances stakeholder and customer satisfaction though sometimes requires more data and provides confidentiality, transparency, and consensus views the variety increases when customer data goes tailor offering. The second issue is the lack of research on the challenges faced by SMEs in implementing AI systems. Small and medium-sized enterprises (SMEs) face similar issues to larger organizations although the infrastructure is lacking. There are fewer experts to understand AI systems and these barriers need to be understood to support the SME types for better utilization of AI-controlled personal resources. According to the study of Adamkiewicz et al., (2022) the work already collected does not adequately address the specific ethical and legal challenges facing the UK fashion industry (Adamkiewicz et al., 2022). The introduction of GDPR has made it more difficult to use AI for personalization while remaining compliant. There is insufficient research on the UK fashion industry's perceptions of ethical and legal challenges, and further research is needed to address this gap and develop improved policy strategies.

AI improves the level of customer service personalization with unique challenges emerging when companies adopt the technology. This is current problems such as data privacy and protection, algorithms' bias, and high implementation costs, pose challenges to the adoption of DM technologies, particularly for SMEs. However, it has seen great possibilities of using AI to create personal experiences, enhance customer satisfaction, and manage supply chains better. It is possible to state that the following goals and objectives emerged. By filling the gaps, left in the literature with in-depth insights into how AI influences the UK fashion industry the findings of this work will be useful for practicing employees and policymakers.

Chapter 3: Methodology

3.1 Introduction to Research Methodology

Research methodology is a comprehensive approach to research work that enables the researcher to go through the research process from conception, data collection, analysis, and data interpretation. According to the study of Egbebu, (2022) the research methodology is an important behavior in mind that it excludes the epistemological paradigm within which a research problem is addressed and the data is interpreted (Egbebu, 2022). This study aims to outline the method used in conducting this study and the results obtained. It provides details of the philosophical stance, research method, data collection and sampling approach, data analysis technique, and ethical concerns used in the study of the impact of AI on customer service customization in the fashion industry in the United Kingdom. The method used in this study is understandable in correlation with Saunders' Research Onion framework which forms the structural framework of this chapter.

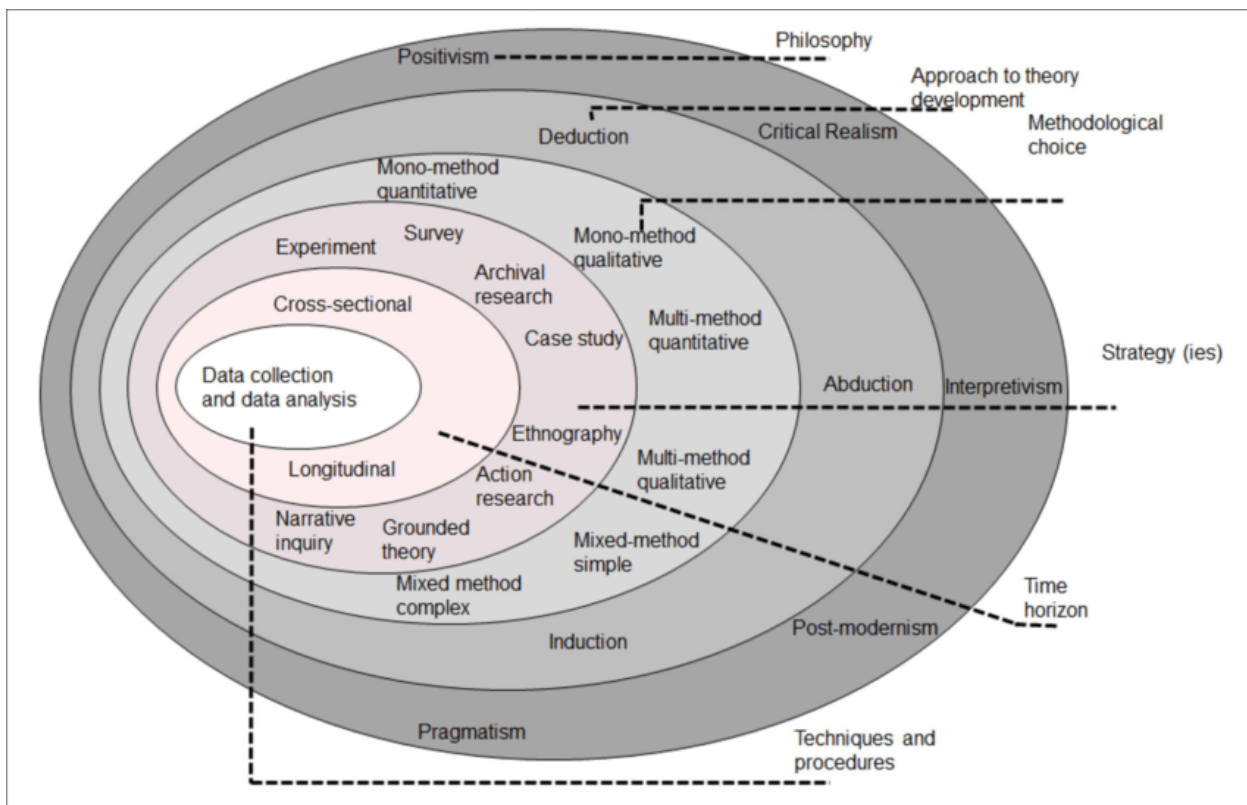


Figure 1: Saunders' Research Onion Framework

(Source: Research Gate)

3.2 Research Philosophy

Research philosophy entails the idea system that forms the foundation of information in a research endeavor. Saunders et al (2019) noted that research philosophy regales to basic beliefs inside about the world and the nature of knowledge and knowing. The research philosophy comprises assumptions regarding ontology, epistemology, and methodology. The four major research methodologies are positivist, interpretivist, critical realist, and pragmatist. According to the study of Koehn, (2023), these philosophies affect how the researcher perceives the world and how they conduct data gathering analysis and interpretation (Koehn, 2023). According to the study of Alharahsheh and Pius, (2020), the primary paradigm of concern is interpretivism, or the following of the subjectivity of meanings that people give to their experiences and their activities. Interpretivism is different from positivism which assumes the social reality to be quantifiable (Alharahsheh and Pius, 2020). Interpretivism is more interested in the richness of the human experience and hence ideal for studying the effects of AI on customer care customization because the key variables are human behavior, attitude, and perceptions.

The type of research philosophy is crucial because determines the general approach towards the study and the consistency between objectives and methodologies. According to the study of Taherdoost, (2022) adherence to a particular worldview is useful in choosing the correct approach to gathering and analyzing data and guaranteeing that the

results would be significant within the scope of academic inquiry (Taherdoost, 2022). If an educational study does not have a clear philosophy of the research process then there is a high probability that the study design will not adequately answer the posed research questions and therefore the conclusions drawn will be partial or potentially inaccurate. In this research, the chosen interpretivist epistemology enables the researcher to strive to establish personal bias and perceptions of individuals impacted by AI in customer service. In light of human-centered experiences, interpretivism facilitates the examination of how AI affects consumers and how ethical mentors are considered in AI practices in the fashion sector.

3.2.3 Interpretivism in This Study

According to the study of Stolpe and Timms, (2024), interpretivism is ideal because it opens up the research for a deeper understanding of how AI helps to achieve the personalization of customer services in and out of the fashion industry UK (Stolpe and Timms, 2024). It is quantitative research that looks to identify how fashion professionals, AI developers, and customers have opinions on the usage of AI technologies, their advantages, constraints, and ethical considerations. Interpretivism allows the researchers to approach these perspectives more freely and with fewer rigid and set questions which is crucial when comparing and having a better understanding of AI as a phenomenon in customer services.

For instance, when studying the use of artificial intelligence in personalization, this paradigm enables the researcher to explore the ways that people make sense of their interactions with AI in terms of product recommendations, virtual fitting rooms, and the like. According to the study by Quach et al., (2022), these technologies further depend on technological capacities and not consumer trust, attitudes to privacy, and ethics that differ from one person to the other person (Quach et al., 2022). Therefore, there is a need to adopt an interpretivist approach to research to capture this diversity of perspectives and thus provide meaningful insights.

3.3 Research Approach

3.3.1 Definition of Research Approach

The research approach denotes the style of how theory is linked to the research questions and can also indicate how knowledge will be obtained and analyzed. Saunders et al. (2019) describe the deductive and inductive approaches of two primary techniques. A confirmed analytical method deals with theories and hypotheses while an emerging analytical method is aimed at developing a new theory based on data gathered. In inductive research, the researcher draws hypotheses or theories about the outcomes that have been seen.

3.3.2 Inductive Approach in this Study

The type of sampling used in this study is purposive non-probability because the study seeks to develop theories from data collected in the field rather than using data to test theories drawn from existing literature. In the study of Rashid and Kausik, (2024) the research strategy applied here is inductive since the literature review portrays a small number of scholarly studies on the involvement of AI in managing and delivering customized services to customers in the UK

fashion industry (Rashid and Kausik, 2024). The inductive approach will help the study reveal new important bits of information that will be based on the data collected from the stakeholders.

First, surveys are conducted with the participants where they describe their impressions, experiences, and opinions about AI in personalization. These observations will be used to synthesize theory about the persistent themes and patterns that are emerging in the use of AI, its impacts, and its ramifications. This approach is flexible as it makes it possible for the researcher to revise the research design based on the insights of the data collected. (Zhang and Liu, 2024). The use of AI in the fashion industry is relatively new and has not been explored a lot in the literature the application of the inductive approach is suitable for this study as it does not limit the researcher regarding her hypothesis (Zhang and Liu, 2024). The developed inductive approach assists in creating a new theoretical contribution that may form the basis for future research in this area.

3.4 Research Method

3.4.1 Research Methodology

Research methods can be described as the procedures or instrumentality that are used in the collection and analysis of data. Methods can be classified into three main types: These includes qualitative research, quantitative research, and mixed research. According to the study of Akyildiz, (2021), exploratory research is usually qualitative since qualitative includes non-numeric data therefore appropriate for researching subjective experiences, perceptions, and phenomena (Akyildiz, 2021). In this study, the Quantitative method is used to further explanation of this research.

3.4.2: Use of Quantitative Method in This Study

This research adopts the quantitative method because it is well suited to examine challenging contextualized subjects such as AI-based personalization of customer services. In the case of the current study, quantitative research will be concerned with specific aspects of participant actions, feelings, and perceptions. This study is an exploratory quantitative approaches that help the researcher to capture a broad perspective and detailed picture of how the concept is understood and engaged by the participants involved in the fashion business, AI designers, and consumers (Lorenzo-Romero, Andrés-Martínez and Mondéjar-Jiménez, 2020).

Interpretivist philosophy and inductive approach are the most appropriate methods to use for a quantitative approach in this study. The survey questionnaire can help the researcher appreciate participants' experiences, opinions, and perceptions regarding AI technologies or applications and a variety of opportunities, threats, and ethical concerns tied to personalization based on such technologies. This approach makes it very flexible because new themes or patterns can be developed during the research process.

3.5 Sampling and Data Collection

3.5.1 Sampling

It also refers to the procedure of choosing proper participants so that proper data for the study will be secured. This study employs purposive sampling such as a type of non-probability sampling where the samples are selected based on specific characteristics regarding the research questions. By the study of Lim, (2024) Purposeful sampling is suitable for quantitative work after the researcher aims to understand experts or stakeholders engaged in a particular phenomenon (Lim, 2024).

The reason why purposive sampling is most suitable for this kind of research is because the targeted people including fashion industry practitioners, providers of AI technology, and customers are in the best position to provide insights on how AI can be used to enhance customer services. The researcher needs to recruit participants who are conversant with AI as well as its use so that can be assured of getting good and complete data.

3.5.2 Data Collection Methods

The major data collection tool employed in this study includes a survey questionnaire. Surveys are preferred between both structured and unstructured because the researcher can work with fixed questions while on the same note allowing participants to express themselves. All survey participants are carried out virtually to include participants who may have difficulty coming to a physical location.

The survey questionnaire was distributed among all participants with their permission through the Internet. The survey aims to understand the specific uses of AI personalization by the participants the views on the advantages or disadvantages observed and the ethical issues. Then all the surveys are taped and transcribed literally before carrying out the actual analysis. A survey questionnaire is particularly appropriate to this research since it provides an in-depth insight into the participants.

3.6 Data Analysis

3.6.1 Data Analysis Definition

Data analysis entails a systematic process whose purpose is to understand, categorize, and interpret data. In quantitative research, this entails a process of identifying patterns in the data these patterns include themes and relationships which are then analyzed and described.

3.6.2 Thematic analysis in the present Research

In this research, thematic analysis will be employed as a quantitative technique that is used to search for describe, and analyze patterns within a data set. According to the study Wang, (2023), the thematic analysis is suitable for this research as it helps the researcher to describe themes associated with the research questions and thus enables the researcher to get an in-depth understanding of the impact of AI on the personalization of customer services(Wang, 2023).

Steps in Thematic Analysis:

- i. **Familiarization:** Analyzing the data content by reading the survey transcripts numerous times.
- ii. **Coding:** Highlighting the text or making a color print-out of factually important fragments of the given text and using single concise terms and phrases to label them.
- iii. **Theme Development:** With the primary objectives of the research taken into account these codes into larger themes.
- iv. **Review and Refinement:** The first criterion involves verifying whether the themes respond to the content of the data and whether they are related to the research questions.
- v. **Reporting:** The themes of the study and showing material quotes which are the opinions of participants to give as much detailed information as possible about the study findings.

Thematic analysis is most suitable for this study because it offers a systematic yet open-ended manner of making sense of the gathered data. This method enables the researcher to discover dominant patterns that occurred when participants operated AI concerning consumer service customization.

3.7 Ethical Considerations

3.7.1 Overview

The issue of ethics is considered as one of the main principles that guarantee the performance of studies. According to the study of Ba, (2023), this research respected ethical approval from Ulster University and has followed GDPR in ascertaining the rights of the participants (Ba, 2023).

3.7.2 Key Ethical Principles

- i. **Informed Consent:** Recipients have a practical understanding of the goals of the study their protection and utilization of their data. In creating participation individual consent is first sought in advance.
- ii. **Confidentiality and Anonymity:** To maintain the confidentiality of participants some identifying information may be masked and all information collected is kept confidential.
- iii. **Voluntary Participation:** Participation in the study is voluntary and participants are free to withdraw from the study time for no reason.
- iv. **Transparency:** According to the study Sedlmeir et al., (2022) People are made aware of how their data will be utilized to avoid any secrecy that may be followed in the research conducted (Sedlmeir et al., 2022).

3.7.3 Ethical Approval

The ethical clearance for this research is sought from the research ethics committee of Ulster University. The data collection only moves to the next level after the necessary permits have been given. Responding to the ethical principles makes the study fulfill the participants' rights and respect the consistency of the research.

Chapter 4: Analysis, Findings and Discussion

4.1 Introduction

This chapter examines the survey responses by linking them to our Chapter 1 research questions and goals. The study analyzes data to discover how artificial intelligence affects individualized customer interactions and helps create a better understanding of its influence. According to the study of Chukwudi et al., (2023), the section presents data through visual tools like charts and graphs to show the study results in an easy-to-understand format (Chukwudi et al., 2023).

This study examines how AI technologies have bettered customer interactions by looking at their positive effects and technical difficulties. While they explore the impact of AI on customer interactions and analyzing its pros and cons. The findings of this study are consistent with previous studies on the topic and shed light on the impact of AI on the fashion industry. The main objective of this chapter is to examine the legal norms and ethical issues that arise when companies use AI. This study of Dhirani et al., (2023) investigates important ethical issues related to data privacy and algorithmic biases to create effective solutions that comply with legal mandates and industry standards (Dhirani et al., 2023). To protect customer trust, organizations must appropriately deploy AI according to industry standards.

This section is about the sustainable use of AI technology in the UK fashion industry. This study focuses on the long-term benefits of AI for consumers and businesses. Artificial intelligence improves inventory management systems, allowing companies to eliminate unwanted items from their supply chains. The study of Luce, (2019) shows how artificial intelligence improves customer service in the apparel industry resulting in innovative solutions for the industry (Luce, 2019). This study provides valuable information on how to maximize customer satisfaction while addressing legal, ethical, and environmental issues for businesses of all organizational levels. By evaluating strategic AI use the chapter proves the importance of effective AI adoption in fashion to build the future of British fashion.

4.2 Company / Industry Summary

The UK fashion market remains dynamic and competitive because it reacts to advanced technology developments and market behavior patterns. The fashion business has evolved rapidly over recent years thanks to artificial intelligence technology that empowers brands to deliver innovative solutions. AI technology especially personalization helps businesses create perfect customer experiences while running supply chains better and making operations more effective. These new technologies assist brands in staying competitive while enabling them to better connect with customers through customized digital interactions. According to the study of Rahman et al., (2023) the UK fashion sector is embracing Artificial Intelligence because online sales have grown quickly and customers want unique experiences (Rahman et al., 2023).

Today's customers want companies to know their favorites predict what they need and develop personalized products. Modern technology allows brands to use AI to speak directly with customers through services like Catboat

personalized help fashion advice, and custom product suggestions. These tools help customers shop easier and more enjoyable by connecting them quickly to personal advice and narrowing down their choices. However, integrating AI technologies comes with its own set of problems. Several issues prevent many businesses from using AI including too much expense to set up not enough internal AI skills and changes that are tough for people to accept. By the study of Bibri et al., (2023) The ongoing use of AI technology creates worries about how much strain it puts on the environment which companies have trouble fixing since they are already getting criticism about their environmental effect (Bibri et al., 2023). The people worry about whether companies are protecting their privacy, that computer systems may have faulty programming, and if organizations show they handle data correctly all making businesses struggle to bring AI to their operations. The world needs both new technology and ethical rules that help technology meet proper standards.

The study concentrates on how AI is altering how UK fashion stores handle customer interactions. The research investigates new technology solutions that strengthen customer relationships improve company operations, and help businesses stay ahead in a growing market. The study investigates ways to address both ethical and operational challenges by strengthening data protection measures making algorithm processes more open, and helping businesses get better at dealing with technology. By the study of Nishant, Kennedy, and Corbett (2020) highlights that this research demonstrates the potential of AI to improve the apparel industry, while highlighting the importance of AI and emphasis on meeting responsible environmental regulations (Nishant, Kennedy, and Corbett 2020). The report highlights the importance of AI in helping companies meet customer requirements in the field of responsibility. This study enhances the understanding of artificial intelligence (AI) and its impact on the UK apparel industry. It makes easier for companies to develop robust rules for the use of AI in ethical review data suggest that AI is important for the apparel industry in prioritizing customer needs and making more ethical decisions.

4.3 Data Analysis

This section examines responses collected from 200 individuals with UK apparel companies through a Google Forms search, according to a study by Hamdan et al (2021). Hamdan and so on. (2021) does the together this same data, it reached out to 200 key decision makers from the UK fashion industry along with companies using AI technology and real customers. The survey was conducted to explore the impact of AI on fashion customer service and what increasingly in personal fashion. It systematically analyzed and categorized all participant responses to identify important areas related to our research topics.

Key Themes and Codes:

The responses were categorized into specific themes to identify trends and patterns:

- **Impact of AI on Personalization:** The main reason for our study was to find out how AI affects fashion companies when they create customized solutions for their customers. People marked as Positive Impact when their feedback showed customers becoming happier, getting help faster, and seeing better-recommended products. These results showed that integrating AI works well in making customers feel special when buying fashion items.

When customers faced difficulties with AI-generated suggestions or missed human interaction noted their concerns as challenges. The study shows AI helps customers get better-personalized shopping in fashion while also revealing its current problems.

- **Benefits and Barriers:** Many customers said they save time while the software can give them better and personalized item suggestions. By the study of Ahmad et al., (2020) the analysis points out the benefits of AI in fashion companies which will help them run their operations more smoothly (Ahmad et al., 2020). While progressing, problems called Barriers began to appear along the way. Businesses had trouble implementing AI widely because of steep costs, lacking enough experts to handle AI, and integrating AI systems with their current systems. The challenges companies meet when planning AI integration make clear the many different things they need to think about and pay for.
- **Concerns Related to Ethics and Legal Issues:** People were worried about both moral and legal risks while giving their answers. According to the study of Ostrom, Fotheringham, and Bitner, (2018) the way AI handles customer information keeps systems clear, and works fairly falls under our Ethical Issues listing because people are getting more worried about how their rights and trust in these technologies get affected (Ostrom, Fotheringham and Bitner, 2018). When people talk about legal rules and making sure personal data remains secure put that in the regulatory barriers category. Our surveys show must invest time and effort in deploying AI technology while considering both fair use and meeting laws.

AI in Shopping:

The main section studied was how AI affects people's shopping habits. In the study of Bunea et al., (2024) AI in shopping is analyzed that the big improvement in shopping has been echoed by 75% of respondents in this space, with 60% giving the feature that personalized recommendations contributed (Bunea et al., 2024). About 40% of users worry their data could get stolen showing that concerns over privacy and security need to be handled for AI to become reliably accepted by the fashion business. Data shows that AI brings both important advancements and hard problems for the UK's fashion industry, serving customers better but raising questions about privacy, cost, and tech issues. This section introduces the important work still to be done on bringing AI technologies into the UK fashion business in a way that works well and protects the environment. The research study shows both good and bad areas while demonstrating that fixing these problems becomes essential for AI to help the UK fashion industry improve itself.

4.4 Findings of the Study

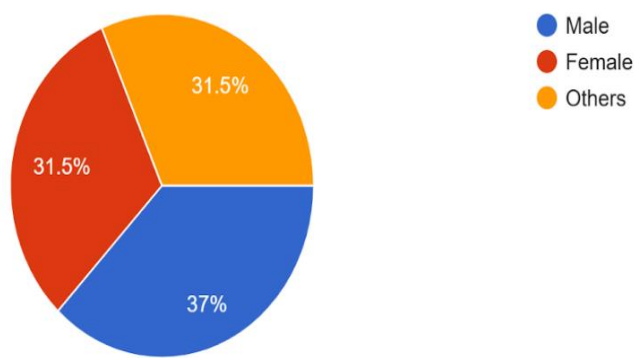
The study shows how UK fashion companies experience big changes when they use AI algorithms to customize products. Customers told us how AI-customized interactions left them more engaged and happier. By the study of Vallabhaneni et al., (2024) AI-powered personalization tools now let companies run their customer support better both by saving staff valuable time and recommending exactly what products customers need during their shopping trips (Vallabhaneni et al., 2024). Customers told us they valued AI's quickness in understanding their habits and connecting

with them better. Despite its benefits, our research showed some big problems that keep AI from reaching its full possible power. Customers worry most about how their data stays safe. Many people worry about how secure their info will be when they use AI systems. Users also struggled to use computers because they had not learned much about AI technology before. The study found people want businesses and organizations to teach customers about AI so they have faith and can feel secure using these systems.

The way AI handles information fairly and shows what it does for the public has become a top concern. People recognized that showing how AI works and making sure everyone gets equal treatment are both vital keys to how AI can be used ethically. By the study of Lal, Dwivedi, and Haag, (2021) keeping both computer systems and personal interactions in balance was named another important factor (Lal, Dwivedi, and Haag, 2021). People believe AI can make work faster but believe keeping human connections with customer’s remains crucial for building lasting customer relationships. The research shows how AI works in UK fashion stores now and helps identify why some people struggle with putting AI into practice. It helps stores learn how to use AI better while protecting customers and staying honest.

What is your gender?

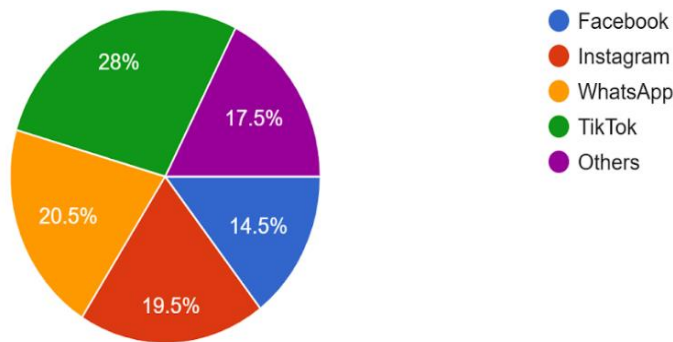
200 responses



Male respondents represented 37% of the population, while female respondents represented 31.5% and "Others" 31.5%. A balance of this demographic representation of the genders makes it possible to get diverse insights into the analysis. By the study by Babatunde et al.,(2024) Such demographic balance ensures that more understanding of the impact of AI-powered personalization on customer services in the UK fashion industry reflects varied experiences and concerns (Babatunde et al., 2024).

Which of the following social media platforms do you use the most?

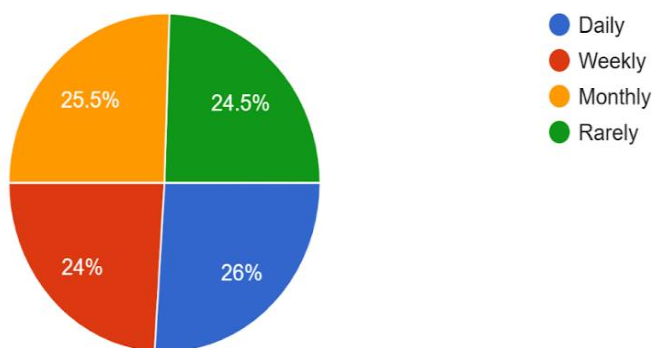
200 responses



According to above chart shows that WhatsApp and TikTok are the most popular social media among the 200 respondents. WhatsApp is at the top with 20.5% due to its widespread use in communication and instant messaging. According to the study by Rajendran, Creusy, and Garnes, (2024) then comes TikTok at 28%, which may be due to its rapid growth and popularity, especially among the young, who like short-form video content (Rajendran, Creusy, and Garnes, 2024). Instagram is the second largest at 19.5%, supporting its nature of visual orientation content along with features such as Stories, Reels, and Shopping. Facebook comes next at 14.5% with a decrease in preferential usage, especially among the younger generation as the site has lost its earlier day's appeal. Finally, the others section constitutes 17.5%, meaning that there are still other platforms being used but not dominantly.

How frequently do you interact with AI-powered customer service tools?

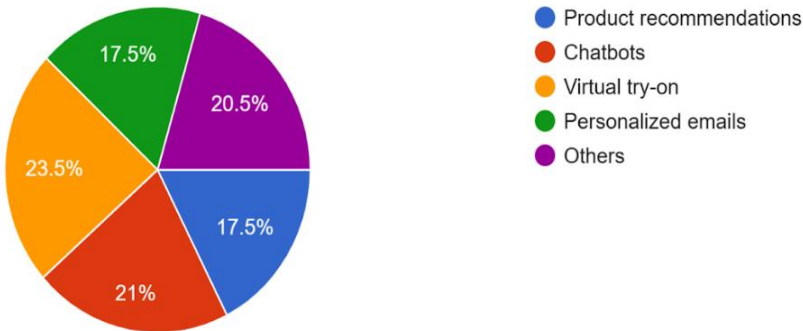
200 responses



The data shows that users regularly interact with AI-powered customer service tools. A significant 26% of respondents interact with these tools daily, showing the growing reliance on AI for immediate support. By the study of Borsci et al., (2021) the interactions are also common every week, with 24% of respondents using AI tools regularly (Borsci et al., 2021). Monthly use accounts for 25.5%, showing that AI customer service is becoming a staple for users,

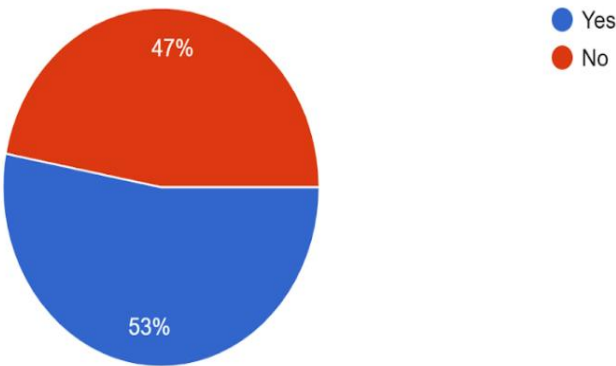
even if not daily. However, 24.5% of respondents rarely use these tools, which may indicate either a preference for human interaction or limited access to AI-powered services.

What type of AI-driven personalization feature do you find most useful?
200 responses



According to the study of Zhou et al., (2025) the virtual Try-On ranked as the most used AI-driven personalization feature, with 23.5% of users finding it most useful (Zhou et al., 2025). It enables the virtual trying of products from the fashion and beauty industries, thereby creating an immersive shopping experience for customers. Chatbots ranked second, at 21%, because they are functioning well by providing instant customer support and assistance. Product recommendations and personalized emails each accounted for 17.5%, indicating their importance in improving the shopping experience through the personalization of suggestions and content. By the study of Belanche, Casaló, and Flavián, (2024) the others category accounts for 20.5%, which suggests that there are other AI features that users find valuable, though less prominent (Belanche, Casaló, and Flavián, 2024).

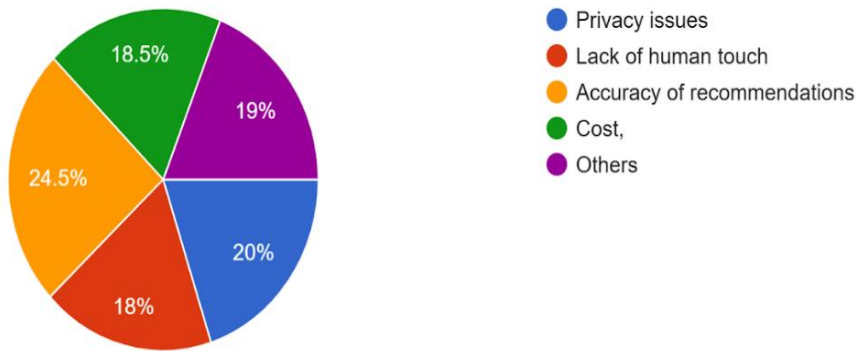
Have you experienced any advantages of AI personalization in customer services?
200 responses



As such, the data shows that 53% of the participants will experience benefits through AI personalization in customer services, meaning people take readily to AI-driven enhancements. These advantages may include improved

service efficiency, quicker response times, and better recommendations. According to study of Gerlich, (2023) the 47% have not experienced this benefit, which might be a sign of disapproval over the AI experience itself, preference for human communication, or simply limited exposure to AI-driven services (Gerlich, 2023). Overall, there is a significant positive response, but there is still a considerable proportion of users who feel that AI personalization has not yet improved their customer service experience.

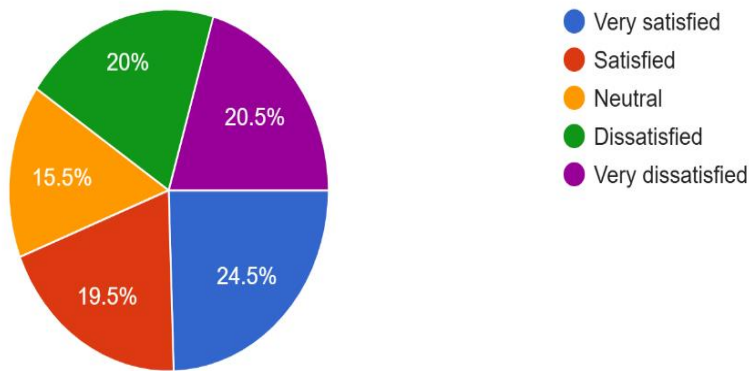
What are your primary concerns regarding AI in customer service?
200 responses



The above chart shows that key concerns about AI in customer service appear as follows: There is a critical concern about recommendations being accurate: 24.5% were worried about whether AI could be relied upon for accurate suggestions; privacy issues run a close second at 20%, with questions over how people's personal information is handled and protected. By the study of Liu-Thompkins, Okazaki, and Li, (2022) the lack of human touch is another notable concern at 18%, which suggests that some users value human interaction for its empathy and understanding (Liu-Thompkins, Okazaki and Li, 2022). Cost is also a factor with 18.5% of respondents worried about the potential financial impact of AI services. Lastly, the others category accounts for 19%, indicating additional concerns not captured in the main options.

How satisfied are you with the current AI personalization in customer services?

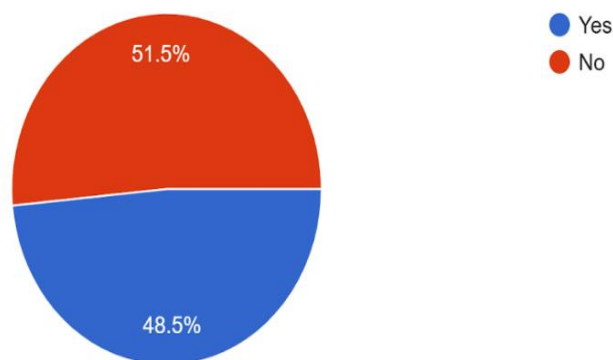
200 responses



The data shows mixed levels of satisfaction with AI personalization in customer services. By the study of Watanabe et al., (2022) a combined 44% of respondents are either very satisfied (24.5%) or satisfied (19.5%), indicating a significant portion of users appreciate the AI-driven enhancements in customer service (Watanabe et al., 2022). On the other hand, 36.5% said they are not satisfied (20%) or even very dissatisfied (20.5%), implying that nearly one-third of users might be unhappy about AI experiences, due to factors like personalization inaccuracy or not having human-like interaction. More than 15.5% of respondents show a neutral view, which also demonstrates a more lukewarm response toward AI's inclusion in customer services.

Would you recommend AI-enhanced customer services to others?

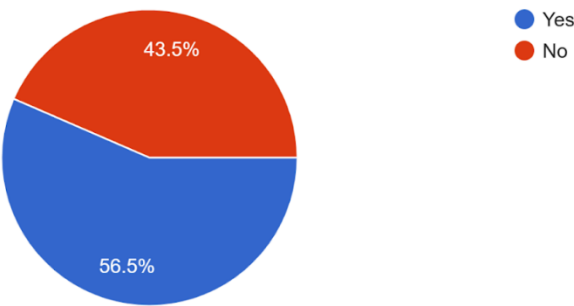
200 responses



The statistics present a nearly evenly divided split between the respondents recommending AI-based customer services. According to study of Paneru et al., (2024) the total polled 48.5 % would recommend the AI-based service, suggesting an adequate portion have found the benefits in using them and would also be willing to share those good experiences (Paneru et al., 2024). At the same time, 51.5 percent said they would not recommend it. This split response

reflects the fact that although AI personalization may have some benefits for others, there is still considerable reluctance probably due to issues like accuracy, privacy, or lack of a human touch in the service delivery interaction.

Do you believe AI personalization has transformed your shopping experience in the fashion industry?
200 responses



According to the result, 56.5% believe AI personalization has altered the way people shop in fashion therefore, there is an inference that AI features in the forms of personalized recommendations, virtual try-ons, and even promotions that match individual requirements and interests can affect users positively toward engaging with a fashion brand. According to the study by Komor, (2023), 43.5% think that AI hasn't changed the shopping experience that much, and this may imply that either the technology is not fully effective for everyone or some customers prefer to shop the traditional way (Komor, 2023). Generally, the answer leans towards the AI improving the shopping journey for most users.

4.5: Discussion of Research Findings

The research findings from Section 4.5 are analyzed based on the theoretical framework and the empirical research reviewed in the literature. In this context, understand how the findings could be aligned or diverged with established theories and prior research and thus assess whether the research objectives are met. This report provides a comprehensive insight into the impact of AI-powered personalization on the UK fashion industry. The next section provides a discussion of the findings about the theoretical framework established and the empirical research. According to the study of Alraja, Butt, and Abbod, (2023), it can determine whether the objectives of the study have been met and whether the findings are consistent with or contrary to established theory and research (Alraja, Butt, and Abbod, 2023).

General alignment with theory: The main result of this study, that AI significantly enhances consumer authenticity is consistent with theoretical frameworks presented in the literature. Holmlund et al. (2020) emphasized that the findings of this study support the use of big data and AI algorithms for hyper-personalization. Consumers demonstrate greater satisfaction and engagement when they experience highly personalized shopping experiences facilitated by artificial intelligence such as catboats virtual fitting rooms, and product recommendations. The fashion industry has increased the use of AI to create customized design recommendations. By the study of Stecuła, Wolniak and Aydın, (2024) Participants

in this study highlighted the convenience, importance, and immediacy of AI-powered systems, especially virtual shopping, and tailored recommendations for them, improved shopping experiences (Stecula, Wolniak and Aydın, 2024).

The literature identifies AI-powered products, such as virtual fitting rooms and catboats as important contributors to user satisfaction. Virtual fitting rooms allow customers to simulate trying on clothes, while catboats provide instant customer assistance. Fashion retailers can now use this technology to enhance the immersive and personalized shopping experiences of their customers. All participants in our survey believe that these AI tools significantly improve the shopping experience. While the retaining existing customers and attracting new ones requires shopping experiences that AI can easily customize. These sessions include product recommendations and strategic guidance as per the research. The findings of this study show that AI influences apparel development and corroborates the empirical facts provided by previous research (Tarun Kumar Vashishtha et al., 2024).

Divergence with Existing Literature: While the findings of this study are consistent with most of the current literature, they differ from other studies in some important respects. A notable feature of the use of AI in the fashion industry is the emphasis on ethical considerations. This study highlighted data privacy and the need for greater transparency in the operation of AI systems, aspects overlooked in previous research Holmlund et al. (2020) noted that previous research has acknowledged the importance of AI ethics. This study highlighted important concerns with customer data security and transparency in algorithmic decision-making. Due to the increasing presence of AI in everyday life which requires individuals to be aware of the risks associated with it. Researchers and participants in this study expressed skepticism about the transparency and consistency of the data processing, and the legislation that provides individual guidance. The study by Nguyen, (2023) the rise in news stories about privacy violations by AI systems and misuse of personal data has received a lot of media attention lately (Nguyen, 2023).

A notable insight from this study is the challenge of adopting AI among SMEs in the fashion industry. While large fashion brands can easily integrate AI due to their abundance of resources, many SMEs face major challenges due to their limited budgets and inadequate technical knowledge. This topic has received and provides limited attention in the literature our understanding of AI in fashion has grown exponentially. By the study of Rehman et al., (2025) while many studies have examined the impact of AI on fashion retailers, few have addressed the challenges faced by small and medium-sized enterprises (SMEs) in adopting comparable technologies (Rehman et al., 2025). The study of economic constraints and a shortage of skilled workers capable of capital investment AI to compete with larger enterprises. This recent finding of challenges and challenges faced by SMEs provides broader implications and clarifies what the adoption of AI means for companies of different sizes and resources.

Research Objectives Met: All of the objectives outlined at the beginning of this study were met. The main objective of this study was to investigate the impact of AI on customization in customer service. Data shows that customers are increasingly satisfied, loyal, and engaged due to improved personalization facilitated by AI. Product recommendations, customized ads, and virtual marketing assistants driven by artificial intelligence have been identified as key delivery channels for customer experience improvement in the UK fashion industry. This finding validates previous research

highlighting the potential of AI to shape personalized customer experiences. The second objective of the study was to examine the pros and cons of using AI to enhance fashion marketing. While AI has some advantages, such as time efficiency, increased product recommendations, and improved customer engagement, the main challenges outlined, research shows that it has negative impacts as well including concerns about data security and the need for appropriate AI. By the study Hasan, (2024) the findings suggest that although AI technology improves operational efficiency and customer service data security and ethical use issues need to be addressed before consumers fully adopt the technology (Hasan, 2024).

Third, the legal and ethical aspects of AI. Clients have significant ethical concerns according to the findings, mostly focusing on data privacy and algorithmic transparency. According to study of Eitel-Porter, (2020) Consistent with previous research, the findings highlight the need for strong ethical standards in AI research, development, and implementation (Eitel-Porter, 2020). Individuals are increasingly aware of the risks associated with entrusting their personal information to AI systems and want organizations to be transparent about their data processing. The results highlight the importance of organizational adoption of AI systems emphasizing an ethic that prioritizes customer confidentiality and trust. Finlay, The study aimed to provide recommendations on how to better integrate AI into customer service practices within the UK fashion industry. The study concludes that finding a balance between automation and human interaction is essential for sustainable AI integration. Participants emphasize that although AI enhances productivity and personalization human involvement is still needed. By the study of Rane, Choudhary and Rane, (2024) Sustained customer satisfaction and trust can only be achieved through the integration of AI expertise with the empathetic, emotionally intelligent engagement of customer service employees (Rane, Choudhary, and Rane, 2024).

Summary: This chapter shows how AI has transformed the fashion industry in the United Kingdom through an analysis of the survey results. The findings suggest that AI-driven optimization significantly increases performance, stakeholder, and customer satisfaction. Technologies such as virtual fitting rooms, chatbots, and tailored recommendations have transformed the way customers interact with fashion organizations. These tools provide convenience for every customer and enhance the shopping experience. The study highlights the challenges preventing seamless AI integration. Data privacy, ethical dilemmas, and legal concerns are important obstacles to overcome. Small and medium-sized enterprises (SMEs) face significant challenges in obtaining capital to implement artificial intelligence (AI) technologies thus limiting their competitiveness with large vendors as a result emphasizes the importance of ethical and sustainable use of AI. Sustainable success requires being transparent and honest with consumers about the use of their data, increasing their trust, and complying with all relevant regulations. Removing these barriers empowers the UK clothing industry and harnesses the power of AI, resulting in increased innovation, growth, and competitiveness.

Chapter 5: Conclusions and Recommendations

5.1 Conclusion

The study examined how AI is helping UK fashion brands deliver a more customer-friendly experience. They looked at ethical and legal concerns and developed strategies to ensure that AI would support the sustainability of the fashion industry. The study examined the pros and cons of incorporating AI. To preserve our customers' trust and prevent legal challenges, it is important to comply with data privacy laws, including the requirements of the GDPR. This study used different research methods together to answer all the questions asked before. Data shows that AI is modernizing the UK fashion business by giving customers better and more tailored service. Customers can now find personalized product picks, try clothes virtually before buying, and get answers from artificial intelligence chat assistants to enhance their shopping experience. The new changes are making customers bond more with the brand, feel more pleased, and help operations move forward in an organized way.

The primary obstacles fashion brands face with AI adoption include protecting sensitive data while the expense of implementing AI solutions, and employees' lack of deep technical background. The study revealed that making data widely available and protecting customer privacy turned out to be big challenges for AI development. Despite facing various hurdles, both buyers and industry representatives remain hopeful that AI will help their companies improve customer service and make shopping more enjoyable.

The research objectives were met through the following outcomes:

- **Customer Satisfaction and Personalization:** AI proves it can make services more tailored to each person's needs. By collecting this data, businesses can make sense of it and create shopping experiences that meet individual customers' wants and preferences. When people can try clothes on virtually in online fitting rooms, they can find their size sooner, buy more confidently, and keep fewer items in their returns pile.
- **Operational Efficiency:** AI helps run many parts of the business better, making it easier to manage stock, handle orders, and serve customers. Chatbot and similar automated systems have become common in the fashion business helping companies answer everyday customer questions automatically instead of needing human employees. When businesses apply AI systems, they can both make their customers happy and work more effectively with fewer expenses.
- **Barriers to AI Adoption:** The research found that while AI offers many benefits, companies face several major hurdles when trying to use it. The biggest obstacles were found to be expensive software setup costs, employee teams lacking AI knowledge, and slow acceptance of new changes. Small companies face two main problems with AI - first, they cannot easily pay for it and second, they have trouble keeping the systems up to date.
- **Ethical and Legal Considerations:** It looked into how implementing AI raises questions about both its ethical and legal aspects. Three key challenges we face are keeping users' information safe, making AI systems clear to everyone, and stopping AI from making unfair choices in its recommendations. Meeting data protection guidelines, especially GDPR requirements is vital for our customers to trust us and protect us from future legal troubles.

5.2 Recommendations

Based on the results, several recommendations have been proposed for fashion brands that want to integrate AI into their customer service strategy. The findings offer ways fashion companies can use AI to improve customer service.

1. Policy Recommendations:

- **Prioritize data privacy and security:** Companies in the fashion industry can demonstrate transparency in collecting data from customers and strive to comply with General Data Protection Regulation (GDPR) regulations. Clients can maintain their confidence in us because of our transparency about data management and our practice of obtaining consent before any transaction.
- **Establish principles for ethical AI development:** Apparel companies should develop standards to define appropriate AI development. Machine learning algorithms can reveal clearly, neutrally, and fairly their internal mechanics. AI systems should be evaluated regularly to prevent any unintentional biases in customer interactions.
- **Data protection compliance:** To avoid legal complications and protect customer data, companies must comply with the rules set by data protection laws such as the GDPR. Organizations can reduce the risk of lawsuits by creating a compliance department or engaging with data protection lawyers.

2. Advice on Adopting AI Technologies:

- **Gradual Integration of AI Technologies:** Companies in the fashion industry should gradually integrate AI technologies into their operations rather than hastily adopting technology. This is especially important for small to mid-sized business owners, who face the complexity of a wrench.
- **Training and Upskilling of Employees:** Organizations should allocate resources towards the education and professional development of their employees by providing training in the basic principles of artificial intelligence and providing the expert technology required to implement AI.
- **Collaboration with AI Experts:** Partnering with AI experts or technology companies that better understand the role of AI in integrating customer service is beneficial for the fashion industry. The partnership accelerates system adoption, and technical experience ensures that AI solutions meet all regulations.

3. The Best Ways to Develop Customer Interactions:

- **Strengthen customer support with AI power:** Research shows that customer experience is enhanced by the rise of AI-enabled virtual assistants and chatbots to provide consumers with a more convenient shopping experience for customers. The clothing industry continues to achieve this by providing the best product recommendations that AI algorithms should be tested and enhanced.
- **Maintain a Balance between Automation and Human Interaction:** Despite the advances of AI in providing basic services, individuals still choose human help for complex customer service issues. So, it is important to find a balance between the two.

The proposed solution is a hybrid system that integrates both AI and human customer service agents. Fashion companies need to teach their employees to deal with sensitive customer data with sensitivity and compassion.

4. Sustainability Recommendations:

- **Prioritize energy-efficient AI solutions:** As fashion companies increasingly embrace AI, Businesses and IT providers who recognize the importance of sustainability must collaborate and choose AI solutions that reduce energy consumption. Companies need to consider renewable energy to power AI technologies.
- **Sustainable funding for AI research:** The fashion industry should collaborate with academic institutions and AI developers to reduce the negative impact of AI on the environment and provide customer service. Research into sustainable AI technologies is essential to ensure that fashion companies use technology responsibly in the manufacturing process.

5. Developing AI into Customer Services Operations:

- **Short-Term (0-6 months):** analyze all existing AI technology to determine what needs to be improved. Then, offer additional features such as virtual try-ons, catboats, and finally employee training. It starts with connecting with AI developers and choosing the most appropriate technology for your company's needs.
- **Medium-Term (6-12 months):** Start by adding AI-based catboats and product suggestion systems to test their benefits in customer service operations. Update data privacy terms to match new standards while making sure all AI systems follow data protection rules.
- **Long-Term (12-24 months):** Expand AI use throughout our company by adopting advanced functions such as virtual fitting rooms and predictive analysis systems. Test AI systems to learn from customer experiences and upgrade them with new information from performance indicators.

5.3: Limitations

Our investigation shows key findings about AI's impact on UK fashion customer service but also faces important restrictions. In sample size and diversity, the research study asked 200 stakeholders which included fashion business people, AI technology providers, and their customers to answer questions. Our small research group does not represent the full spectrum of stakeholder opinions including smaller companies and diverse consumer segments. In geographical focus, the study examined fashion industry practices in the UK with limited application for other international markets. The way AI affects and gets used for customer service will vary from place to place because different regions have their ways of doing business and use different tech systems. The study highlights the business and customer benefits of AI but avoids technical details about its implementation. Future research would need to review AI implementation problems that businesses currently face when merging AI with their existing technology systems and reducing AI features to specialized items.

5.4: Future Work

Several avenues for future research in this area could further enrich our understanding of AI's role in the fashion industry:

- **Expansion of Sample Size:** Future research should gather data from multiple participants representing various types of fashion businesses worldwide to study AI system effects on global customer support.
- **Longitudinal Studies:** Researchers should track an industry over several years to understand AI technology systems as they evolve while continuing to support industry sustainability.
- **Exploration of AI in Other Fashion Segments:** Research teams should examine if AI tailoring benefits extend beyond retail customer service into other parts of the fashion business.

This research demonstrates that artificial intelligence technology helps UK fashion companies improve their customized customer interaction. Despite the problems AI encounters most companies recognize the valuable benefits it delivers for interacting with customers and running operations. Fashion companies can reach AI's full potential and achieve ethical growth through our suggested strategy. Future studies will help make AI better fit in today's fashion market as it changes and evolves.

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Approved Ethical Forum:

Ulster @ QAHE

Ethical Approval Form

Dissertations / Projects involving Human Participants

----- READ THE
FOLLOWING INFORMATION CAREFULLY

- ◆
- ◆ This Ethical Approval Form must be completed by all students intending to undertake research as part of their Ulster University Masters course. This form specifically focuses on students on the following Masters courses:
 - MSc International Business - Dissertation (BMG847) MBA -
 - Business Project (BMG843)
- ◆ This Ethical Approval Form must be completed by all students and submitted by the end of the following modules which precede the start of their Dissertation / Business Project where the research will be Undertaken:
 - International Business Research Methods (BMG871) for MSc International Business Project
 - Management and Research (BMG835) for MBA
- ◆ Before starting to complete the Ethical Approval Form, reference should be made to the Ulster University Guidance on Ethical Standards for Research involving Human Participants:
 - ◆ https://www.ulster.ac.uk/_data/assets/pdf_file/0003/331878/Policy-Human-Research-V5.pdf
- ◆ When filing up the Ethical Approval Form ensure you provide all information that each question requires: Questions shown with a red * are compulsory and must be answered;
 - Questions without a red * can be answered once information is made available;
- ◆ The last section (*Supervisor's Section*) should be left blank for the supervisor to fill.
- ◆ Once the Ethical Approval Form is filled out: click on "**Submit**"
- ◆ click on the 3 horizontal dots (...) at the top right of your browser screen and select '*Print response*' and print the

form as a *pdf file*.

Click on "***Save my response***" so that you can edit it later to make changes if you need to update it or your supervisor asks you to;

At the start of your Dissertation / Business Project, email the pdf of your Ethical Approved Form to your Assigned supervisor who will review it before any research / fieldwork is carried out, irrespective of this being primary or secondary, to:

Evaluate the potential impact of the research on the intended human participants, and

Either

- Approve and sign the Ethical Approval Form, email it back to you to upload on Turnitin, and then start collecting data,

or

- Reject the Ethical Approval Form, ask you to modify specific sections, and then re-evaluate it until it gets approved so that you may start collecting data.

Once the Ethical Approval Form is *approved* by the supervisor:

- Submit the approved form on Turnitin by the end of week 4;
- Drag and drop the approved form in the Appendix of your Dissertation / Business Project.

The Dissertation / Business Project will not be marked if the Ethical Approval Form has not been: •
approved by the supervisor;

- Submitted on Turnitin by the end of week 4;
- Included in the Appendix of your Dissertation / Business Project.

Student and Course Details

1. Student's Name and Surname *

2. Student's Ulster University ID *

- Begins with B00 followed by 6 numbers.
- It can be found on your CAS letter or Black Board.

3. Student's Ulster email address *

- Do NOT include your personal / private email address

4. Course and Module: *

 MSc International Business - Dissertation - BMG847

☐ MBA - Business Project - BMG843

5. Year of Study *

☐ 2022 / 23

☒ 2023 / 24

☐ 2024 / 25

☐ 2025 / 26

6. Attendance *

☒ Full Time

☐ Part Time

Research Details

7. Title of your MSc IB Dissertation / MBA Business Project: *

- An indicative but close to the specific topic researched title would suffice at this stage.

EXPLORING THE TRANSFORMATIVE EFFECTS OF AI ON PERSONALIZATION OF
CUSTOMER SERVICES: A CASE STUDY OF THE UK FASHION INDUSTRY

8. Name of Supervisor:

- This will be communicated to you at the start of your Dissertation / Business Project.
- You will have to return to the Ethical Approval Form at the start of your Dissertation / Business Project to enter the name of your Supervisor.
- Once you submit the Ethical Approval Form you will be given the opportunity to save a link which will allow you to return to the form and update it.

Dr Alasana Njie

9. Dissertation / Project Type *

☐ Undergraduate (UG - BA / BSc / BEng / etc)

☒ Postgraduate (PG - MA / MSc / MEng / etc)

10. Summary of Proposed Research *

Provide short answers (1-2 sentences per bullet point) for the following:

- What is your research all about?
- Which company and/or industry will the research focus on? •

What is the issue you intend to investigate?

- How will you be collecting your primary data? •

How will the data collected be analysed?

- What form will your recommendations take?
- Who will benefit from the outcomes / recommendations from your research and how?

1: Exploring the transformative effects of Ai on personalization of customer services: a case study of the UK fashion industry

2: Fashion Industry

3: Impact Of AI on the UK fashion industry 4:

Online Surveys

5: The data will be analyzed to identify trends and insights on AI's impact.

6: The recommendations will provide strategies for integrating AI and addressing key challenges in the fashion industry.

7: Fashion companies will benefit by improving efficiency, personalization, and ethical practices through AI integration.

11. Start Date of Research

- The date when you intend to **start** collecting primary data for your dissertation / project

11/25/2024



12. End Date of Research

The date when you intend to **stop** collecting primary data for your dissertation / project

1/25/2025



13. Does your Proposed Research involve Deception of Participants?



- ♦ I.e. have participants been 'deceived' or 'lied to' into participating in the research study?

☐ Yes

☒ No

14. Does your Proposed Research involve Inducements to Participate? *

- ♦ I.e. have participants been offered a 'prize' for agreeing to participate in the study?

☐ Yes

☒ No

15. Does your Proposed Research involve any Possible Psychological Stress? *

- ♦ i.e. will you be asking about potentially 'uncomfortable' or 'sensitive' personal issues?

☐ Yes

☒ No

16. Does your Proposed Research involve any other special circumstances? *

i.e. will you be asking about medical records, involvement in crime, or other similar?

☐ Yes

☒ No

17. Regarding Questions 13 to 16: *

If any one or more answers to questions 13 to 16 are "yes":

- Provide details regarding how you will deal with these issues.

If all your answers to questions 13 to 16 are "no": •

Enter N/A below.

N/A

18. Please indicate who the likely participants involved in the research will be: *

- Click all that apply

☒ Professionals (in general)

☒ Professionals (industry/company specific) ☐

Retirees (in general)

☐ Retirees (industry/company specific) ☐

Children (under 18 years old)

☒ Adults

☐ The Elderly

☐ Vulnerable Groups

☐ People with a learning disability

☐ People from Ethnic or other Minorities

☐ Other

19. **Please provide details of the likely participants involved in the research as identified in Question 18:**

*

Professionals (industry/company specific): Individuals working in the UK fashion industry, including designers, marketers, supply chain managers, and other roles relevant to the fashion sector.

Adults: General adult participants who may be engaged in or impacted by fashion industry practices and AI technologies.

20. You are expected to undertake **Primary Research**. How will data be collected? *

Click all that apply

- ☒ Questionnaire (Online)
- ☐ Questionnaire (Face-to-Face)
- ☐ Interviews (Online)
- ☐ Interviews (Face-to-Face)
- ☐ Observations
- ☐ Focus Groups
- ☐ Field Research
- ☐ Other

21. **Regarding the primary research method indicated in Question 19 for the collection of primary data for the proposed research: ***

- Provide details and justification for the method selected.
- Include sample questions for the questionnaire/interview routines.

They reach a wide audience efficiently, are cost-effective, and allow for convenient, anonymous responses.
How does incorporating AI increase creativity and effectiveness in fashion design?

As to how AI improves customer satisfaction and loyalty, on what aspects of personalization does it focus?
In what ways does AI help in cutting costs and enhancing effectiveness across the supply chain of fashion products?

22. When undertaking primary research, **Informed Consent** of all Participants must be obtained before any participant enters the research and **NO** participant should be engaged or approached to take part in the research without obtaining their Informed consent first. All participants must be '**informed**' of the purpose behind the research using an Information Sheet, either on paper or online, and must '**Consent**' prior to participating in the research. *

- Indicate below how informed consent will be obtained.
- If informed consent does not need to be obtained, click on the 'other' option below and provide justification why this may be so.

☒ **Questionnaire:** Information on the research will be provided to the participants at the top of the questionnaire and the first question will ask the participants to confirm or reject Consent before answering any of the questions.

☐ **Interview:** Information on the research will be provided to the interviewees using an Information Sheet and the standard Consent Form will be used which every interviewee will have to sign before the start of the interview.

☐ **Focus Groups:** Information on the research will be provided to the members of the focus Group using an Information Sheet and the standard Consent Form will be used which every member of the Focus Group will have to sign prior to the start of the discussion.

☐ **Observations:** Information on the research will be provided to the company manager(s) using an Information Sheet and the standard Consent Form will be used which has to be signed by the manager(s) responsible for the area of the specific company where the observation will be done.

☐ Other

Confidentiality of Data

23. **Have steps been taken to ensure Confidentiality of Data? ***

☒ Yes

☐ No

24. **What steps will be taken to ensure confidentiality of data collected? ***

- Rationale for anonymity and data storage, etc •

Click all that apply



Participants will remain anonymous.



All data collected will be stored in a password protected folder in my laptop.



All data collected will be destroyed not later than 12 months after the research is completed.



Other

25. **Declaration by the Student: ***

I confirm that:

- I have provided the above information honestly and to the best of my ability.
- I have read and understood the Research Ethical Guidelines and agree to abide by them in conducting my dissertation / business project.
- I understand the importance of adhering to the Research Ethical Guidelines and I am aware of the penalties for breaching them.
- I agree to notify my academic supervisor if there is a change to my dissertations / business project and/or further ethical approval is needed.
- I confirm that I will share all details of data received from respondents with my supervisor who will ensure this will not be shared further.
- I will report all data and findings in a responsible way.
- I will refrain from plagiarism, deception or the fabrication or falsification of results or any other action that could be interpreted as research misconduct.

To the best of my knowledge, I confirm that:

- There is no risk to any participants. •

There is no risk to me.

- There is no risk to the institution or QA in terms of liability or reputation.

☒ I Confirm

☐ I decline

26. **Date the Ethical Approval form was completed or updated by the Student**

11/18/2024



Supervisor's Section - Review and Decision

(DO NOT FILL IF YOU ARE A STUDENT)

- This section must be filled only by the supervisor or the Dissertations' / Business Projects' Coordinator

27. **Supervisor's Name:**

Dr Alasana Njie

28. **Decision and Declaration from Supervisor:**

I confirm that:

- I have reviewed the above information provided by the student
- I have discussed my evaluation of the contents of the Ethical Approval Form with the student • I have reached the following decision on the ethical direction of the student's dissertation / Business Project:

☒ Approved

☐ Updates / clarification required Rejected

29. **Date the Ethical Approval Form was approved by the Supervisor:**

☐ 21/11/2024

Please input date (M/d/yyyy)





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Data Link:

<https://docs.google.com/forms/d/e/1FAIpQLSe9H8HhLJlepgTB1956FNg3ossKrIaCG0HKRv3OoL6WsetVjQ/viewform?usp=header>

Primary data collected via the questionnaire

