

# A Study on Optimistic need of Artificial Intelligence in Fashion Retail Industry

Niveditha A S

Assistant Professor, Fashion & Apparel Design, Army Institute of Fashion & Design, Bangalore, Karnataka, India

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## ABSTRACT

*The fashion e-commerce market has been growing steadily in the past few years accounting for USD 371 billion or 21% retail sales of apparel and footwear globally in 2019. But as most of the worlds are experiencing self-isolation and lockdown measures, the corona virus crisis is pushing brands to digitalize even faster to survive, engage with customers, designers, manufactures and redesign their supply chain operations. Many sectors are reeling from the fallout of the COVID-19 pandemic as they stare into the abyss of the impending recession and fashion has not been immune. But aside from economic factors, the industry is also facing lasting structural change. Artificial Intelligence optimizes conversion, Average Order Value (AOV) and repeat purchase rate by understanding a customer's preferences and suggesting the right products and outfits for them. Recommendations are tailored to the physical stores with latest technologies by implementing virtual trail room, regional trends, as well as the customers' body type, color, desired occasions and personal style.*

**KEYWORDS:** Artificial Intelligence, AL based retail innovation, Fashion Retail

## 1. INTRODUCTION

This study aims to understand optimistic need of artificial intelligence in fashion retail to survive in this pandemic situation. The use of AI in the fashion industry of 2020 has become so well entrenched that 44% of the fashion retailers (who have not adapted to AL) or technologies by the fashion & retail industry is expected to reach \$7.3 billion each year by the year 2022. AL in fashion retail is driven by the increasing need for inventory management and the growing influence of social media in the fashion industry. Additionally, identify future fashion trends in advance with customer's buying behavior analysis and growing fast fashion retail are further expected to propel the growth of the market over the coming years.

Fashion is one of the industries that have been particularly hit by the pandemic. Although it is still too early to measure the definite effects that corona virus will have on fashion retail, one thing is certain that things will not be the same. Until the start have on fashion retail, one thing is certain that things will not be the same. Until the start of the pandemic, the sales forecast for 2020 looked promising. However, the COVID-19 crisis has dramatically affected the fashion industry worldwide while many retailers are concerned about the sales figures. It is clear that the wider sector faces significant structural changes which will affect customer's behavior the fashion calendar and even people's style.

**Need of the study:** To measure the effects of pandemic on fashion retail industry and help them to thrive in the post COVID-19 by intervention of Artificial Intelligence.

Objective of the study:

- To identify the challenges facing by fashion retail.
- To analyze the profile of leading players operating AI in fashion retail.
- To classify and forecast the AI in fashion retail based on component, application & end user industry.

## II. REVIEWS OF LITERATURE

Bertacchini, bilotta & Pantano [1] mentions several ways through which retail can benefit from the robotic system. For instance, according to them, the attractiveness of robotic technology will encourage customers to engage more in shopping activities and this will help the retailers boost their sales. Customers will benefit from faster and intelligent guidance during shopping and thus make more effective and efficient purchase decisions. Robotic technology will support retailers endeavors towards minimizing the personnel costs and enhancing the staff well being.

Huddleston [2] says AI driven robots can clean physical retail space more effectively. These cleaning robots remove a person's need to stay to clean the space after business hours. Such opportunities can lead to increased customer satisfaction, retention as well as overall experience in addition to cost savings, all is also used to customize the layout of the retail stores to maximize the satisfaction of customers and boost sales. The robots are Walmart's newest janitors. The autonomous robots are scrubbing the floors of all Walmart stores in the United States. The employees of Walmart can map out the cleaning routes of AI supported robot scrubbers and can send them on unmanned missions of cleaning by pressing a single button.

Shankar V. [3] has written that AI can be handy for customer service. Even big retailers such as Starbuck and Lowe's are using AI to boost customer experience. In this regard, most retailers are looking for voice and text – based AI that can analyze customer's attitude towards buying a particular product and service. AI has made significant progress in the area of payment as well. AI not only makes transactions faster but also dissuades fraud. To proactively identify and avoid

payment fraud, PayPal's AI uses a deep learning system based on years of digital transactions.

## III. MATERIALS AND METHODS

The scope of this study is confined to the organized Fashion Retail sector to thrive in Post COVID-19. The respondents belong to metropolitan cities of major states of India. The researcher conducted survey through Google form with set of questionnaires to reach the respondents through social media. The survey was conducted in July 2020. The data is analyzed using factor analysis and Principal Component Analysis. Total sample size has been taken at 200 respondents/sample units. Sample units were well dispersed based on their gender, age group and occupation. In 200 participants, the percentages of male and female respondents are 28.5% and 71.5% respectively. 58% of them fall under the age group of 18-25 years which is the highest, while 20.5% fall under 26-35 years age group. 16.5% fall under 36-50 years, followed by 5% responders fall under 50 years and above. Maximum respondents who participated in this survey are working in various government and private institutions (52%). Followed by students (39%), Business (4%) and Non workings members (5%).

## IV. RESULTS & DISCUSSION

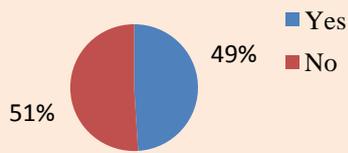
The following results are presented that are obtained from selected questionnaires. Each question has its purpose in order to analyze.

**Fig 1. Prefer to visit physical store for shopping during Pandemic**



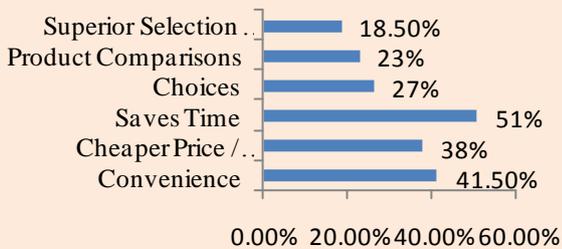
The questionnaire on respondent's preferences on visiting a store for shopping resulted at 84% NO, and the cause for this is very evident that respondents are conscious in keeping themselves safe during the pandemic and avoid getting infected.

**Fig 2. Aware of virtual trail room in online shopping site**



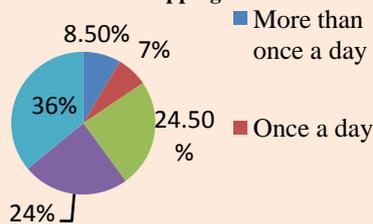
Customers, who were inclined towards real time shopping (visiting stores) as they have options of Trail Rooms, prefer the same facility in Online Shopping as well. The study shows that 49% of customers are aware of VTR (Virtual Trial Room). However, Indian online fashion retails have minimal exposure to this facility. This facility will be a boost to the Indian Online Fashion retails.

**Fig 3. Reason to prefer Online Shopping**



Based on the responses received on “likes about online shopping”, Time saving and convenience spikes at 51% and 41% respectively while other area like choices, comparisons, pricing and product availability range between 18% to 28%.

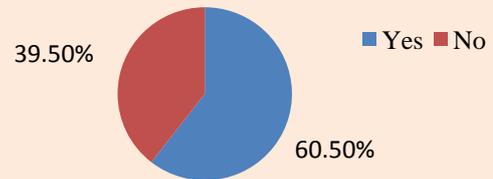
**Fig 4. How often Online Window Shopping**



The above facilities leverage the frequency of visit to the online shopping sites by frequent inline shoppers as they are sure they can get what they are looking for without investing too much of time and effort on browsing multiple sites and of course not visiting stores for what they are looking. Based on the survey, 36% shoppers visit online stores on need basis while 64% are window shoppers who visit

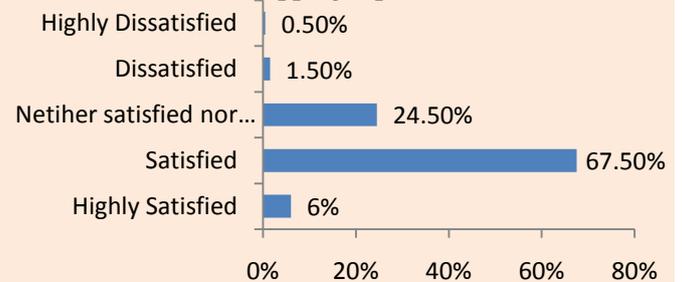
online shopping sites at various products fulfilled in the comfort of their homes.

**Fig 5. Aware of Intervention of Artificial Intelligent behind online shopping**



The world is achieving various heights in the field of technology to meet customer needs in all possible means and accelerating towards digitizing all the transactions in any field one can think of. Application of Artificial Intelligence is making this possible and this has made online shopping a convenient medium for all shopping needs making it very secure and reliable. While 60% of responders are aware of AI’s role in the field of online shopping, 40% are still in the process of understanding AI and it is not too far from the days when the AI would rule the online shopping worlds.

**Fig 6. How Customers are satisfied with Online shopping experience**



Satisfaction can also be recorded as “Consumer’s fulfillment response” consumer’s contentment or disappointment in result of comparing a product’s perceived performance or outcome according to his/her expectation. It is the feel of gratification with respect to customer’s purchasing experience. Multiple factors like convenience, merchandizing, site design, security and service ability impact the customer satisfaction. Based on these criteria, below survey records at 67.5% satisfied customers with online shopping while 1.5% customer base has an unsatisfied response to online shopping. Technology has arguably made our lives easier. One of the technology innovations in banking, finance and commerce is the online payments a technological breaking through that enables us to

perform financial transactions electronically, thus avoiding long lines and other hassles, providing greater freedom. However, online shoppers prefer to use their credit/ debit cards or any transaction medium that directly links to their bank accounts or their personal information at the minimum to safeguard themselves from fraudulent transactions and secure their personal information. Based on the survey, 38.5% online shoppers prefer to opt cash on delivery (COD) which is convenient, safe and secure. While, 22% prefer to use Net Banking, 26.5% 13% online shoppers use their credit / debit cards for their online purchases. The gift cards did not have any show in the survey.

## V. CONCLUSION

According to the analyses carried out, a positive trend clearly emerged for the future. The answers provided by respondents represent hope for an increase in the fashion ethical approaches to business and in the adoption of advances in technology, logistics, payments, demand for convenience and trust has further given way to consumers, who want more choices when it comes to shopping online, more control over when their purchases will be delivered, a secure payment channel, a convenient returns process and most importantly an integrated buying experience that has the best of both worlds. In order to react to the real time situations, here are some points which the retailers can consider, make sure we know what we have and when we have it. Expect major changes in customer behavior and be ready to answer them moreover, we're in the middle of a season change, so we'll have to adapt to that too. Have a detailed overview of our inventory so we can take immediate action when needed, without having to wait for days for stock review. This way, we'll avoid problems, like offering out-of-stock products.

It is important for the luxury retailers to remain at the top of the mind of their high-end consumers. They may use tactics like virtual shopping session, online make-up classes, trunk shows or fitness sessions to engage and interact with the consumers. Luxury brand managers can provide personalized attention to the top clients by one to one engagement and conversation with them. They should develop meaningful content that foster a sense of community building during this epidemic. As per survey result few sets of reconsiders comfortable in offline store shopping experience, so to maintain the government norms

towards COVID-19, offline stores can give virtual trail rooms and quick access to merchandise inside store by implementing AI. Right way to AI intervention will allow retailers to do that in a faster, more creative and cost-effective way.

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