International Journal for Innovative Engineering and Management Research
PEER REVIEWED OPEN ACCESS INTERNATIONAL JOURNAL
www.ijiemr.org

# AI IN BUSINESS ANALYTICS AND DECISION MAKING

***Ms. Tanvi Priya***
Student , BS CS , VISHWA VISHWANI BUSINESS SCHOOL
Hyderabad, Telangana, India | tanvipriy27@gmail.com | Mobile : 7989501548

***ABSTRACT***

Every business today collects a huge amount of data, but the real challenge is using it to make better decisions. This is where Artificial Intelligence is changing everything. Earlier, business analytics was mostly about checking past reports and taking decisions based on experience. It was time consuming and not always accurate. With AI, the process has become much faster and smarter. AI tools can analyze large and even unstructured data like customer reviews and social media comments to find patterns that humans might miss. It not only shows what happened, but also predicts what may happen next and suggests what to do. Many companies are already using AI to understand customer behavior, manage inventory and detect fraud. This helps managers make quicker and more confident decisions. However, there are still challenges like data privacy, biased data and the need for skilled people to handle AI systems. The article explains how AI is transforming business decision-making with real-life examples, showing that AI will not replace managers but will support them in making choices.

***Keywords:*** Artificial Intelligence, Business Analytics, Decision Making, Predictive Analytics, Data-Driven Business

## *1. INTRODUCTION*

Nowadays, every business decision depends on understanding customers. What do they want? What is trending in the market? In clothing stores, this is a big problem. A customer comes with only one or two hours, but the shop has thousands of dresses. It is very difficult to check every dress, find the right size, compare the price and material, and then go to the trial room. It is a long and tiring process.

This is where Artificial Intelligence can help. AI can take the customer's choice like size, colour, budget and quickly find the best dresses from the shop's collection. It can also help the shop owner to understand which dresses are selling more and which are not.

For example, in December 2025, Google launched its virtual try-on tool in India. In this, a person can upload their photo and see how a dress will look on them. This shows that this technology is real and possible. Taking this idea forward, this article proposes a smart virtual dressing room for physical stores. This system will help customers find dresses fast and also help shop owners make better business decisions.

## *2. WHAT IS AI IN BUSINESS ANALYTICS?*

Business analytics means understanding business data to take better decisions. AI makes this work faster and smarter.

For example, a shop can check which dresses were sold the most last month. That is descriptive analytics. It can check why a dress was not sold - was it because of high price or no stock? That is diagnostic. AI can also predict which colour will be trending next season. And finally, it can suggest what the owner should do, like bringing more stock of a particular item. This is called prescriptive analytics. The main point is, AI should not just show data, it should help in taking decisions.

*__3. MY IDEA:__ AI-POWERED SMART VIRTUAL DRESSING ROOM*

My idea is to solve the problem of limited time and too many choices. Instead of searching the whole shop, a customer can use a big smart screen in the store.

This system will have three main parts:

**a) Personalized Product Search**: The customer can select their size, favourite colour, material like cotton or silk, budget, and occasion like party wear or daily wear. The system will immediately check the shop's digital catalogue and show only matching dresses with price and availability.

**b) Virtual Try-On**: After selecting a dress, the customer can see how it looks on them on the screen itself. With their permission, the system can take their photo and show the dress on them. This is already being done by companies like Google, but we know that a virtual image is not 100% perfect. It cannot show the exact fitting or how the cloth feels. So the trial room should still be there for final confirmation.

**c) Help for Business:** Every time a customer searches for something, the shop gets useful data. For example, the owner can know that many people are searching for "blue colour kurta under 1500" but it is out of stock. Or a particular dress is viewed a lot but no one is buying it. This information can help the owner to manage stock, change prices, and bring new designs based on real demand.

**How it will work - Step by Step:**
1. Customer selects size, colour, budget on the screen.
2. System shows only matching dresses available in the shop.
3. Customer selects a dress and tries it virtually on the screen.
4. Customer compares with other similar dresses.
5. If they like it, they can take the real dress and go for final purchase.
6. The shop owner gets a daily report of what customers are searching for.

***4. BENEFITS AND CHALLENGES***

**Benefits:**
- Customers save time and are more satisfied.
- Shop can handle more customers.
- Owner gets clear data about customer demand.
- Less work for staff to find dresses for customers.

**Challenges:**

- Virtual try-on may not be 100% accurate every time.
- Customer photos are private data, so we need to take permission and not store them without consent.
- The digital stock must be always updated, otherwise it will show wrong information.
- Setting up big screens, cameras and software will cost a lot of money for the shop.

***5. CONCLUSION***

In conclusion, AI is not here to replace humans, but to help them. In retail business, it can make shopping easy for customers and also help owners take smart decisions based on data, not just guesswork. My proposed idea of a smart virtual dressing room connects both customer comfort and business profit. Its real success can only be known after testing it in a real store and checking if it really saves time and increases sales. But it is a practical step towards the future of smart retail.

***REFERENCES***

1. Google India Blog. (2025). Virtual apparel try-on tool comes to India. Google.
2. Applied Sciences Journal. (2024). Review on Virtual Try-On Systems: Challenges and Future Directions.
3. National Institute of Standards and Technology. (2023). Artificial Intelligence Risk Management Framework (AI RMF 1.0). U.S. Department of Commerce.
4. Russell, S., & Norvig, P. (2021). Artificial intelligence: A modern approach (4th ed.). Pearson.
5. UNESCO. (2021). Recommendation on the ethics of artificial intelligence. UNESCO.