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# AI-Driven Customer Behaviour Analytics for Competitive Advantage

Snehal Subhash Sakarkar

Dnyaan Prasad Global University, Dr.D.Y. Patil School of Management & Research, Tathawade, Pune,  
Maharashtra, India

**ABSTRACT:** Artificial Intelligence (AI) basically refers to this innovative technology where firms deal with huge amounts of consumer data and try to pull out useful insights that actually help in decision-making. In today's really competitive business environment, it kind of becomes important for companies to understand customer behaviour if they want to keep satisfaction high, improve efficiency and stay ahead of others. This is usually done with AI tools like machine learning, predictive analytics and data mining, which help in studying patterns and trends in user behaviour.

The main idea of this study was to see how AI can actually help organisations make sense of consumer behaviour and how that, in turn, supports them in getting a competitive edge. The approach used was descriptive research, with both primary and secondary data sources. For primary data, questionnaires were shared with consumers who use digital services. From the analysis, it was observed that AI technologies do improve customer engagement and allow more personalised services, and they also support better decision-making. So overall, it kind of makes things run a bit smoother... and honestly, a little quicker and more responsive when it comes to reacting to customer needs and changes.

**KEYWORDS:** Artificial Intelligence (AI), Customer Behaviour Analytics, Competitive Advantage, Data Analytics, Digital Services, Customer Satisfaction

## I. INTRODUCTION

Artificial Intelligence (AI) has kind of become one of the most important technological shifts shaping how modern businesses actually work. In today's fast-moving and pretty competitive environment, companies are more and more depending on advanced tech to improve efficiency, keep customers satisfied, and make smarter decisions. AI helps them go through large amounts of data quickly, and honestly quite accurately too, so they can spot patterns, trends, and what customers usually prefer. This makes decision-making more data-driven and helps businesses react better to changing needs in the market.

Customer behaviour, in simple terms, is about how people think, act, and decide when buying products or services. Understanding this is really important for businesses trying to build better marketing strategies and long-term customer relationships. Nowadays, customers interact through websites, apps, social media, and all that, creating loads of data. Traditional methods struggle a bit here, so AI tools like machine learning help analyse it better, predict needs, and even personalise services. Because of this, AI-driven analytics has become quite essential for staying competitive and growing in today's digital business world.

## II. REVIEW OF LITERATURE

AI has slowly become a really important tool for organisations trying to improve customer satisfaction, efficiency, and overall performance. In recent times, researchers too have been looking more at how AI-driven analytics helps in understanding customer behaviour and decision-making. With growing digital use, businesses kind of rely on it to handle large data, spot patterns, predict needs, and offer better services.

❖ **Smith (2022, Impact of AI on customer satisfaction in retail)** kind of looked into how Artificial Intelligence is shaping customer satisfaction in retail settings, and, well, how it's slowly changing the way customers actually experience shopping. The study basically found that AI-based recommendation systems really help in improving customer engagement and even influence buying decisions. When products are suggested based on past behaviour and



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preferences, customers tend to feel more understood, which kind of leads to higher satisfaction and repeat purchases. It also points out that personalization is quite important in building stronger customer relationships and loyalty over time, and retail firms using these systems can respond better to what customers actually want.

❖ **Johnson and Lee (2021, Predictive analytics in e-commerce)** studied how predictive analytics is used in online platforms. Their work showed that AI tools can analyse past sales and customer patterns to forecast demand more accurately. This helps businesses manage inventory better, reduce extra costs, and avoid situations like stock shortages or overstocking, which is a common issue.

❖ **Sharma and Gupta (2020, Customer segmentation using machine learning)** focused on how machine learning helps divide customers into groups based on behaviour and preferences. Their findings suggest that this makes marketing more targeted and services more personalized, improving overall business performance and competitiveness.

### III. RESEARCH METHODOLOGY

Research methodology is basically the structured way of collecting, analysing, and understanding data to meet research goals. In this study, it was used to explore how customers perceive AI-driven services and their impact on satisfaction and business performance. It helps keep the process clear, a bit organised, and ensures the findings are reliable and useful.

#### 3.1 Research Design:

This study uses a descriptive design to understand customer views on AI-driven services, kind of focusing on opinions, behaviour, and how it affects decisions and satisfaction.

#### 3.2 Sources of Data:

Primary data was collected directly from respondents through a simple Google Forms questionnaire, while secondary data was taken from journals, books, research papers, and a few trusted online sources, more like supporting material.

#### 3.3 Sampling Technique:

Convenience sampling was used here, basically selecting people who were easily available and willing to respond, nothing too complex.

#### 3.4 Sample Size:

The study, well, included a total of 23 respondents who actually took part in the survey, so yeah, it's a fairly small but still workable group.

#### 3.5 Data Collection Instrument:

A structured questionnaire with mostly multiple-choice questions was used to gather quantitative responses from participants.

#### 3.6 Data Analysis Tools:

The collected data was analysed using tables and also simple visual tools like bar charts and pie charts to make interpretation easier.

### IV. DATA ANALYSIS & INTERPRETATION

When you look at the data as a whole, it kind of starts to tell a story... not perfectly clear, not completely messy either, but somewhere in between. There's a pattern, yes, but also a bit of unevenness that you can't really ignore. Some responses feel strong and consistent, while others seem a little uncertain, almost like people are still figuring things out. It doesn't come together in a perfectly smooth way, and maybe that's the point... it reflects real opinions, a mix of clarity and confusion, rather than something too neat or predictable.

Most of the respondents fall in the younger age group, which honestly explains a lot of the trends that follow. Younger users are naturally more active on digital platforms, so it's not surprising that awareness of AI is quite high. In fact, almost everyone seems to know that companies use AI to understand customer behaviour, though that understanding feels more surface-level than deep.



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When it comes to familiarity, people are mostly somewhere in the middle. They've heard about AI, maybe even experienced it through apps or online platforms, but they're not completely confident about how it works. And that uncertainty shows up again and again in the responses. For example, while many agree that AI helps in personalisation and faster decision-making, a large portion still stays neutral, almost like they're unsure whether to fully trust it.

E-commerce clearly stands out as the most recognised sector where AI is used. That makes sense, considering how often people interact with recommendations, targeted ads, and personalised suggestions while shopping online. Other sectors like banking and healthcare are mentioned too, but they don't seem as visible in people's minds.

Another interesting point is that respondents do seem to understand that AI works using multiple data sources—like browsing behaviour, social media activity, and purchase history combined. Still, when it comes to accuracy or overall impact, hesitation comes back. Many people aren't fully convinced yet.

There are also some underlying concerns, especially around data privacy and cost. These aren't dominant fears, but they're definitely present. So overall, the responses feel slightly positive, maybe even hopeful... but with a fair amount of doubt still there, like people are accepting AI, just not completely trusting it yet.

### V. FINDINGS

- A good number of customers are now actually aware of AI-based services across digital platforms, showing rising digital literacy and, well, gradual acceptance of newer tech.
- AI really helps improve customer satisfaction by giving faster responses, more accurate solutions, and smoother service overall.
- Personalisation stands out a lot, with customers liking tailored suggestions and services based on what they've done or preferred earlier.
- AI systems support better decision-making since they help in predicting customer demand and market trends in a more data-driven way.
- Companies using AI usually gain a stronger competitive edge because they operate more efficiently and engage customers better.
- Overall, customers seem fairly positive about AI services, especially when it makes things quicker, easier, and more convenient.
- Still, some concerns remain around data privacy, transparency, and how safely personal information is actually handled.
- The performance of AI systems depends a lot on good-quality data and regular updating or training of models, otherwise results can go off.
- Businesses using AI analytics can spot customer dissatisfaction earlier and respond before it becomes a bigger issue.
- In the long run, AI also helps reduce costs by optimising resources and cutting unnecessary operational expenses.

### VI. CONCLUSION

The study, when you look at it overall, kind of comes down to one thing... Artificial Intelligence has become really important, almost unavoidable, in understanding customer behaviour today. It's not just about handling data anymore or storing it somewhere, it's more about making sense of it. AI helps turn these large, messy datasets into insights that actually mean something, something businesses can use to make better decisions, maybe even quicker ones.

With AI, companies are able to understand what customers need a bit more clearly, and sometimes even predict what they might want next, which is, honestly, quite powerful. This leads to more personalised services, better experiences, and over time, stronger relationships with customers.

Another thing that stands out is efficiency. AI takes over repetitive tasks, the routine stuff, and that frees up time. People can then focus more on strategy, on bigger decisions, instead of getting stuck in daily operations. It kind of shifts the way work happens.



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In a fast-moving and competitive market, companies using AI-driven analytics seem to have an edge. They're more flexible, more responsive... just better prepared overall. But still, it's not completely smooth. There are things like data privacy, ethics, and transparency... and they're not just technical terms, they actually matter. If they're not handled properly, people start to feel a bit unsure, maybe even uncomfortable, and that can slowly affect the trust they have in the system.

So yeah, AI isn't really optional anymore. It's becoming a necessity, slowly but surely, helping businesses grow, adapt, and stay relevant in this digital-first world.

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