

Impact of AI-Based Recommendation Systems on Consumer Purchase Behaviour in Swiggy

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Abstract: *The rapid integration of Artificial Intelligence (AI) in digital platforms has transformed consumer purchasing behaviour, particularly in online food delivery services. This study examines the impact of AI-based recommendation systems on consumer purchase intention, ordering behaviour, satisfaction, and repeat purchase behaviour in Swiggy. The research specifically investigates how personalization, trust, and perceived usefulness of AI recommendations influence consumer decision-making and loyalty. A structured questionnaire was administered to 180 Swiggy users, and statistical tools such as descriptive statistics, correlation, and regression analysis were applied to analyze the data. The findings reveal that AI-based recommendation systems significantly influence purchase intention and ordering frequency. Among the influencing factors, perceived usefulness emerged as the strongest predictor of repeat purchase behaviour, followed by personalization and trust. The results indicate that consumers are more likely to place orders and make impulse purchases when recommendations are relevant, timely, and personalized. Additionally, trust in AI-driven suggestions enhances customer satisfaction and loyalty toward the platform. The study concludes that AI recommendation systems serve as a strategic tool in enhancing consumer engagement and increasing sales performance in digital food delivery platforms. The findings provide valuable insights for Swiggy and similar platforms to optimize their AI algorithms, improve customer trust, and strengthen long-term consumer relationships. This research contributes to the growing literature on AI-driven personalization and consumer behaviour in the digital commerce environment.*

Keywords: Artificial Intelligence, Recommendation Systems, Consumer Purchase Behaviour, Personalization, Repeat Purchase Behaviour

I. INTRODUCTION

The rapid advancement of Artificial Intelligence (AI) has significantly transformed the digital commerce ecosystem, particularly in platform-based service industries. One of the most visible applications of AI in daily life is the use of recommendation systems that personalize user experiences by predicting preferences and suggesting relevant products or services. In the food delivery sector, platforms like Swiggy have integrated AI-based recommendation systems to enhance customer engagement, streamline decision-making, and increase order value. These systems analyze large volumes of user data, including past orders, browsing history, search patterns, time of purchase, location, and ratings, to generate personalized food suggestions in real time.

AI-based recommendation systems rely on machine learning algorithms such as collaborative filtering, content-based filtering, and hybrid models. These algorithms identify patterns in consumer behavior and offer tailored recommendations such as "Frequently Ordered Together," "Recommended for You," "Top Picks in Your Area," and "Based on Your Recent Orders." Such personalization reduces information overload, simplifies the decision-making process, and enhances user satisfaction. In highly competitive food delivery markets, where consumers are presented with thousands of restaurant options, AI-driven personalization becomes a strategic tool for influencing consumer purchase behaviour.



Consumer purchase behaviour in online food delivery platforms is shaped by multiple psychological and technological factors, including perceived convenience, trust, price sensitivity, peer influence, and ease of navigation. AI recommendation systems play a crucial role in shaping these factors by nudging customers toward specific choices. For instance, highlighting trending dishes or providing limited-time personalized offers can create a sense of urgency and influence impulse buying behaviour. Moreover, by remembering customer preferences such as dietary habits, cuisine type, or spending patterns, AI enhances perceived relevance and emotional connection with the platform.

The integration of AI-based recommendations in Swiggy also contributes to business performance by increasing cross-selling and upselling opportunities. For example, when a customer orders a main dish, the system may suggest complementary items such as beverages, desserts, or add-ons, thereby increasing average order value. Additionally, predictive analytics enables the platform to forecast demand patterns and adjust promotional strategies accordingly. From a consumer perspective, this personalization fosters convenience, reduces search effort, and enhances overall platform experience.

However, while AI-driven recommendations offer numerous benefits, they also raise concerns related to data privacy, algorithmic bias, and over-personalization. Consumers may feel uncomfortable if recommendations appear overly intrusive or if data usage lacks transparency. Therefore, understanding how AI-based recommendation systems influence consumer purchase behaviour requires a balanced analysis of both positive engagement outcomes and potential psychological resistance.

II. REVIEW OF LITERATURE

Usman (2025) investigated how AI-based recommendations in e-commerce positively influence consumer buying behavior, revealing that perceived usefulness and trust significantly mediate this relationship. The study highlights that recommendation systems enhance consumer engagement and purchase likelihood when users trust algorithmic suggestions, which suggests similar dynamics could apply to AI recommendations on food delivery apps like Swiggy where personalized suggestions can boost ordering frequency and satisfaction. Kumari & Laheri (2025) conducted a systematic review showing that AI-powered recommender systems shape consumer behavior by improving decision-making, increasing personalization, and affecting trust and privacy perceptions. Their findings emphasize the importance of transparency and privacy in building consumer confidence — important considerations for recommendation features in mobile platforms like Swiggy. Sharma et al. (2025) explored how AI-driven recommendation engines affect online purchase decisions, finding that personalization and algorithmic trust significantly enhance purchase intention while perceived intrusiveness reduces it. For Swiggy, where consumers encounter tailored food and restaurant suggestions, balancing personalization with smooth user experience could be key to influencing ordering behavior. Reshma S., Vineesh A. R., & Mr. Rahul K. R. (2026) examined the role of AI recommendation systems on consumer behavior in digital marketplaces. Their study highlights that AI-based systems leverage user data such as browsing history, past purchases, and preferences to provide highly relevant product suggestions, significantly enhancing consumer engagement and satisfaction. The findings reveal that accurate and personalized AI recommendations improve perceived usefulness, which in turn positively influences purchase intention and overall buying behavior online. This study provides valuable insights into the psychological and behavioral impact of AI-driven personalization, making it highly relevant for understanding consumer purchase behavior on platforms like Swiggy where recommendation algorithms play a significant role in shaping choice patterns. Kumar et al. (2026) analyzed the impact of AI-driven recommendation systems on consumer decision-making and privacy concerns, concluding that personalized AI suggestions increase consumer interest, but privacy issues can undermine trust and satisfaction. Translating this to Swiggy's context underscores the importance of ethical data usage in building sustainable consumer engagement with personalized recommendations. Das et al. (2024) examined how AI content recommendation affects consumer behavior broadly, identifying that algorithmic personalization can shape choice patterns and preferences. Although not specific to food apps, the study supports the premise that recommendation systems influence consumer decisions, which is relevant for platforms like Swiggy integrating AI-suggested menus and offers. Verma et al. (2024) evaluated the effect of AI-driven auto-suggestion



algorithms on consumer behavior in e-commerce, showing that such systems guide online shoppers' choices and brand selection. This insight can extend to mobile ordering platforms like Swiggy where AI suggests relevant dishes, helping increase order values and reducing search friction. Mulekar et al. (2026) studied how AI-powered recommendation systems influence purchase decisions in e-commerce, finding that personalized recommendations help shoppers discover products and make unplanned purchases. While conducted in general e-commerce, these behavioral effects parallel potential outcomes for Swiggy users receiving personalized food recommendations, leading to higher engagement and impulse orders. Reshma, S. & Preman, A. (2025) investigated the *Impact of Chatbots and Voice Assistants on Consumer Purchase Decisions* in online shopping environments. Their study finds that conversational AI technologies such as chatbots and voice assistants significantly influence consumer decision-making by enhancing interaction quality, responsiveness, and user convenience. Using primary data collected from online consumers, the research highlights that AI tools improve customer satisfaction by providing real-time assistance, resolving queries, and offering personalized suggestions, thereby increasing purchase intention and reducing decision fatigue. Reshma, Juli & Athira (2017) examined the impact of demonetization on the trend of e-commerce in rural areas, comparing conditions before and after demonetization. Their study, published in *International Journal of Advanced Research and Development*, used structured questionnaires to collect primary data from rural respondents in India to evaluate changes in the usage of e-commerce and digital transaction methods following the Indian government's demonetization policy. The research highlights that although demonetization aimed to increase digital transactions — including e-commerce activities — its effects were gradual and influenced by factors such as limited internet penetration, low digital awareness, and predominance of cash usage in rural economies. The authors argue that while formal digital payment modes (e.g., internet banking, e-wallets) gained traction post-demonetization, the transition was neither uniform nor rapid due to infrastructural and socio-economic constraints present in rural regions.

Objectives

- To examine the influence of AI-based recommendation systems on consumer purchase intention and ordering behaviour in Swiggy.
- To analyse the role of personalization, trust, and perceived usefulness of AI recommendations in shaping consumer satisfaction and repeat purchase behaviour on Swiggy.

III. RESEARCH METHODOLOGY

This study adopts a descriptive and analytical research design to examine the impact of AI-based recommendation systems on consumer purchase behaviour in Swiggy. Primary data were collected using a structured questionnaire distributed to 180 Swiggy users through convenience sampling. The questionnaire consisted of Likert scale statements measuring variables such as AI recommendation effectiveness, personalization, trust, perceived usefulness, purchase intention, ordering behaviour, consumer satisfaction, and repeat purchase behaviour. Secondary data were gathered from journals, research articles, and online sources related to AI and consumer behaviour. The collected data were analyzed using statistical tools including descriptive statistics (mean and standard deviation), correlation analysis, and multiple regression analysis to determine relationships and predictive effects among variables. The study ensures reliability and validity through structured measurement scales and appropriate statistical testing

IV. DATA ANALYSIS AND INTERPRETATION:

Table 1: Descriptive Statistics of Key Variables (N = 180)

Variables	Mean	Std. Deviation
AI Recommendation Effectiveness	3.92	0.68
Purchase Intention	3.85	0.72
Ordering Frequency	3.76	0.81



Variables	Mean	Std. Deviation
Impulse Purchase	3.70	0.77
Personalization	4.01	0.63
Trust in AI	3.88	0.69
Perceived Usefulness	4.05	0.61
Consumer Satisfaction	3.94	0.65
Repeat Purchase Behaviour	3.89	0.73

Interpretation:

The mean values of all variables are above 3.5, indicating that respondents generally agree that AI-based recommendation systems in Swiggy positively influence their purchase decisions. The highest mean score is for **Perceived Usefulness (4.05)**, suggesting that users find AI suggestions helpful in selecting restaurants and dishes.

Table 2: Correlation between AI Recommendations and Purchase Behaviour

Variables	Purchase Intention	Ordering Frequency	Impulse Purchase
AI Recommendation Effectiveness	0.68**	0.61**	0.57**
Personalization	0.72**	0.64**	0.60**
Trust	0.66**	0.58**	0.54**
Perceived Usefulness	0.74**	0.69**	0.63**

(Significant at 0.01 level)

Interpretation:

There is a strong positive correlation between AI recommendation systems and consumer purchase behaviour.

Perceived usefulness shows the strongest relationship with purchase intention ($r = 0.74$).

Personalization strongly influences ordering frequency ($r = 0.64$).

This indicates that the more useful and personalized the recommendations are, the higher the likelihood of consumers placing orders.

Dependent Variable: Purchase Intention

Independent Variable: AI Recommendation Effectiveness

Table 3: Model Summary

R	R ²	Adjusted R ²	Std. Error
0.72	0.52	0.51	0.48

Interpretation:

$R^2 = 0.52$ indicates that 52% of the variation in purchase intention is explained by AI-based recommendations.

This shows a strong predictive relationship.

Table 4: ANOVA

F	Significance
192.45	0.000

The model is statistically significant ($p < 0.05$).

Table 5: Coefficients

Variable	Beta	t-value	Sig
AI Recommendation	0.72	13.87	0.000



Interpretation:

AI recommendation systems significantly influence purchase intention ($\beta = 0.72, p < 0.001$).

Dependent Variable: Repeat Purchase Behaviour

Independent Variables: Personalization, Trust, Perceived Usefulness

Table 6: Model Summary

R	R ²	Adjusted R ²
0.79	0.62	0.61

Interpretation:

62% of the variation in repeat purchase behaviour is explained by personalization, trust, and perceived usefulness.

Table 7: ANOVA

F	Significance
96.34	0.000

The regression model is statistically significant.

Table 8: Coefficients

Variable	Beta	t-value	Sig
Personalization	0.38	6.45	0.000
Trust	0.29	5.12	0.000
Perceived Usefulness	0.41	7.02	0.000

Interpretation:

Perceived usefulness has the highest impact ($\beta = 0.41$).

Personalization and trust also significantly affect repeat purchase behaviour.

All variables are significant at 1% level.

FINDINGS:

AI-based recommendation systems have a significant positive impact on consumer purchase intention.

Personalized recommendations increase ordering frequency and encourage impulse purchases.

Perceived usefulness is the strongest determinant of repeat purchase behaviour.

Trust in AI-driven suggestions enhances consumer satisfaction and loyalty.

There is a strong positive correlation between personalization and consumer satisfaction.

AI recommendations reduce decision-making time and improve user experience.

More than half of the variation in repeat purchase behaviour is explained by personalization, trust, and perceived usefulness.

Consumers are more likely to rely on recommended restaurants and dishes when they perceive them as relevant and accurate.

SUGGESTIONS

Swiggy should continuously improve its AI algorithms to enhance personalization accuracy.

The platform should ensure transparency in recommendation logic to build greater consumer trust.

Data privacy policies should be clearly communicated to reduce privacy concerns.

AI-based recommendations should incorporate user feedback for better customization.

Promotional offers should be aligned with personalized suggestions to boost impulse purchases.

Swiggy can integrate behavioral analytics to further refine customer segmentation strategies.

Regular monitoring of AI performance metrics should be conducted to maintain recommendation relevance.



V. CONCLUSION

The study concludes that AI-based recommendation systems play a crucial role in shaping consumer purchase behaviour on Swiggy. Personalized and useful recommendations significantly influence purchase intention, ordering frequency, and repeat purchase behaviour. Trust and perceived usefulness act as key mediating factors that enhance consumer satisfaction and loyalty. The results confirm that AI-driven personalization is not merely a technological feature but a strategic business tool that drives customer engagement and sales growth. As digital food delivery platforms continue to expand, effective implementation of AI recommendation systems will be essential for maintaining competitive advantage and strengthening long-term customer relationships.

REFERENCES

- [1]. Das, S., Garg, A., Verma, N., Jha, D., Singhal, R. K., Gaur, M., & Singhal, R. (2024). *Artificial intelligence, content recommendation, biases, and consumer behavior: An analysis of the impact of artificial intelligence on consumer behavior*. *International Journal of Intelligent Systems and Applications in Engineering*, 12(21s), 659–669.
- [2]. Kumar, D., Prasanna Kumari, V. L., Srivastava, A., Srivastava, N., & Ahmed, A. A. (2026). *The impact of AI-driven recommendation systems on consumer behaviour and decision making: A study of personalization and privacy concerns*. *Journal of International Commercial Law and Technology*, 7(1), 152–160.
- [3]. Kumari, A., & Laheri, V. K. (2025). *Understanding consumer behavior through AI-powered recommender systems: A systematic review and bibliometric perspective*. *Indian Journal of Marketing*, 55(8), 9–32.
- [4]. Mulekar, V., Govalkar, M., Shaikh, A., & Katkar, N. (2026). *A study of the impact of AI-powered recommendation systems on consumer purchase decisions in the e-commerce industry*. *Current Trends in Information Technology*, 16(01), 01–06.
- [5]. Reshma S., Sr. Juli A. D., & Athira N. T. A. (2017). *Trend of E-Commerce on rural area: Pre demonetization and post demonetization*. *International Journal of Advanced Research and Development*, 2(2), 38–41. Retrieved from https://www.researchgate.net/publication/400587897_Trend_of_E-Commerce_on_rural_area_Pre_demonetization_and_post_demonetization, [View article](#)
- [6]. Reshma S., Vineesh A. R., & Mr. Rahul K. R. (2026). *Role of AI recommendation on consumer behavior*. *International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)*, 6(1). [10.48175/IJARSCT-30755](https://www.researchgate.net/publication/399502808_Role_of_AI_Recommendation_on_Consumer_Behavior). Retrieved from https://www.researchgate.net/publication/399502808_Role_of_AI_Recommendation_on_Consumer_Behavior
- [7]. Reshma, S., & Preman, A. (2025). *Impact of chatbots and voice assistants on consumer purchase decisions*. *EPRA International Journal of Research and Development (IJRD)*, 10(5), 438–441. Retrieved from https://www.researchgate.net/publication/400560473_IMPACT_OF_CHATBOTS_AND_VOICE_ASSISTANTS_ON_CONSUMER_PURCHASE_DECISIONS, [View article](#)
- [8]. Sharma, S. K., Mehta, S., T. U., M., Puranik, A. M., Singh, R. K., & Sharma, V. (2025). *The impact of AI-powered recommendations on online purchase decisions: A consumer perspective*. *Advances in Consumer Research*, 2(4), 1542–1552.
- [9]. Usman, M. (2025). *The effect of AI-based recommendations on consumer buying behavior in e-commerce*. *Center for Management Science Research*, 3(3), 719–731.
- [10]. Verma, R., Sonker, V., Kumar Singh, R., & Sharma, R. (2024). *An appraisal on impact of artificial intelligence-driven algorithms (auto-suggestions) in determining consumer's buying behavior across e-commerce platforms*. *Academy of Marketing Studies Journal*, 28(1), 1–9.

