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The AI-Powered Plate: Examining Customer Perspectives on Next-Gen Food Delivery

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Abstract

AI technologies have been rapidly adopted into food aggregator apps, changing the user experience dramatically. Thus, the study focuses on the aspect of discovering the perception and acceptance of AI-powered services in this sector pertaining to consumers through voice-activated ordering, recommendation personalization, and predictive ordering. The present study helps food aggregator platforms fine-tune customer-centred strategies and optimize AI technology use by identifying what aspects affect customer trust and engagement with AI-driven services. In terms of improving customer satisfaction, loyalty, and the overall user experience, findings contribute to a small but growing stream of literature on customer-oriented aspects of AI integration in the food delivery sector.

Keyword: Artificial Intelligence, AI, Food Aggregator, Customer perception, Online Food Delivery.

INTRODUCTION

AI-driven meal aggregator platforms are a disruption in the meal delivery industry in India. Features powered by state-of-the-art AI technologies have been embedded in such platforms to facilitate both personalization and customization. Their goals include increasing customer satisfaction and stimulating business growth. These now have features like voice-based ordering, predictive ordering, and smart product recommendations to make the ordering process easier and more efficient for customers.

However, there are concerns about consumer attitudes, acceptance, and impressions raised by the use of AI technology in food aggregator apps. To guarantee the successful adoption and efficient use of AI-powered features, food aggregator platforms must comprehend the viewpoint of their customers. Consumer engagement and platform loyalty can be strongly impacted by their level of trust, perception of these technical developments' utility, and general level of satisfaction

REVIEW OF LITERATURE

The issue of artificial intelligence technology integration into the food delivery industry has been highly debated among academics and business leaders. AI-driven features have, of late, been more implemented within food aggregator platforms in pursuit of improved consumer satisfaction and stimulating the expansion of companies. In this line, it is very important to understand consumer attitude and opinion about such AI-driven services towards appropriate adoption and long-term viability of this technology.

A body of research conducted on consumer acceptance of AI-driven technologies provides some insightful observations relevant to the domain of food aggregator apps. Literature suggests that, based on Davis's 1989 TAM, two major factors are perceived utility and usability that influence acceptance of new technology. Such variables have been shown to impact customers' attitude significantly towards services enabled by AI (Venkatesh& Davis, 2000; Dwivedi et al., 2021).

Previous research by Xu et al. (2017) and Jang et al. (2018) underlined the importance of personalization and customization in the context of food delivery apps, including customer satisfaction. Some examples of AI-based features that can be integrated into a food delivery application for delivering a better customer experience and building brand loyalty are given, such as personalized recommendation and voice-ordering capabilities.

Moreover, the application of AI technology also brings about concerns regarding the security of AI-driven decision-making and the protection of data privacy. If they believe there is little transparency or if they have trust issues with the technology's reliability, there is likelihood for users to be cautious in interacting with AI-powered services.

Insights from other industries, in particular e-commerce and personal assistants, relating to consumers' attitudes toward AI-powered services, can be borrowed into the setting of food aggregators. Scholarship has demonstrated that customers' perceptions and adoption of AI-driven features can be influenced by past experience with AI apps and personal attributes such as age and technological aptitude.

The paper tries to provide an insight into the views and attitudes that clients hold with respect to the integration of AI technology into food aggregator applications, using a corpus of extant literature and adapting it to the specifics of the food delivery sector.

The results may contribute to a growing corpus of research on customer-centric AI deployment and provide the food aggregator platforms with insightful information to improve their AI-driven strategies and customer experience generally.

Research Gap

The key points on research gap are:

- Very few empirical studies have been conducted on AI in the food aggregator industry.
- Most of the prior studies were focused on the general acceptance of AI, not specifically related to food delivery. Insufficient in-depth understanding of consumer concerns regarding AI features in food apps.
- Most studies were carried out in Western markets; this generally leaves a gap in emerging markets like India.

Thus, the present research seeks to fill these gaps by studying user attitudes towards AI features in food delivery apps in India. Results could also give impetus to AI strategies for food aggregator platforms and guide future research in emerging markets.

OBJECTIVE OF STUDY

Objective 1: To understand consumer awareness about AI-driven features within food aggregator apps.

Objective 2: The factors that impact the customer's ability to accept and trust AI-driven services.

Objective 3: To determine the impact of AI-powered features on customer satisfaction, loyalty, and user experience.

Objective 4: Possibilities of challenges and concerns that exist in the integration of AI technology into food aggregator platforms need to be identified by the customer.

Objective 5: Devise recommendations for food aggregator platforms to further customer-centric implementation of AI technologies.

HYPOTHESIS OF THE STUDY

H1: Customers are highly aware of the integration of AI technology in food aggregator apps.

H2: Customers who have higher technological proficiency display better understanding regarding AI-powered features of food aggregator apps.

H3: Perceived usefulness of AI-powered features is positively related to customer acceptance and trust.

H4: The perceived ease of use of the AI-powered features is positively associated with customer acceptance and trust.

H5: Data privacy is the most influential factor that affects customers' confidence in AI-powered features.

H6: Customer satisfaction is influenced positively through the deployment of AI-based features such as personalized recommendations and voice-based ordering.

H7: If customers have a good experience with AI-based features in the food aggregator app, they will definitely showcase loyalty in terms of continued usage of the app.

H8: The perceived value of AI-powered features with respect to order accuracy, speed, etc., will be positively correlated with customer satisfaction and the overall user experience.

H9: There is a concern among customers over the reliability and transparency of AI-driven decision-making within food aggregator apps.

H10: Customers who have higher privacy concerns are less likely to use AI-enabled features within food aggregator apps.

H11: Effective communication and education about the capabilities of AI-powered features will lead to increased customer awareness and acceptance.

H12: Transparent data management, considering the privacy of customer data, can build trust in integrating technology along with AI.

H13: The design of intuitive and customer-friendly AI-driven services with explicit value can lead to high customer satisfaction and loyalty.

METHODOLOGY

1. Research Design: Descriptive Research

In this research, the descriptive research design will be harnessed to determine customers' perceptions and attitudes towards AI-powered features in food aggregator apps. As it aims to present an accurate and detailed description of what is existing at present in respect to customer experiences and their opinions about the integration of AI technology in food delivery platforms, the descriptive research design will be very appropriate for this study.

2. Sample Size: 556

The study will be based on a sample size of 556 respondents. This sample size was determined in view of the following:

a. ***Size of the Population:*** The target population for this study will be the active users of food aggregator apps in India. According to industry reports, food delivery app users are estimated to be around 100 million in India as of 2023.

b. ***Confidence Level and Margin of Error*****:** The confidence level for this study will be 95%, while the margin of error will be 5%. These are standard values in social science research and equate to a good middle ground between statistical rigor and practical feasibility.

c. ***Sampling Technique*****:** This study is going to use purposive sampling techniques. Purposive sampling will be used to ensure the inclusion of those respondents who have experience in using AI-driven features of food aggregator apps.

d. ***Data Collection*****:** In this research, data will be collected through a structured online survey questionnaire. This questionnaire will elicit information on:

- Demographic and usage characteristics of the respondents, including age, gender, frequency of app use, and experience with AI-powered features.
- The second set deals with awareness and understanding of AI-powered features in food aggregator apps.
- The third set deals with perceived usefulness, perceived ease of use, and trust in AI-driven services.
- The fourth set deals with Impact of AI-powered features on customer satisfaction, loyalty, and overall user experience
- The fifth set deals with Concerns and challenges of integrating AI technology into food aggregator platforms

This survey would span the numerous online and offline channels of the time, including social media platforms, in-app user communities, and email outreach to the customer base of leading Indian food aggregator platforms.

e. ***Data Analysis*****:** Analysis will involve quantitative and qualitative data. Quantitative analysis relies on statistical techniques in assessing the hypotheses, testing relations between key variables, regression modelling, correlation analysis, and descriptive statistics.

Thematic analysis will be conducted on the qualitative data—informed open-ended survey responses—to examine the trends, patterns, and

themes that emerge from customer perceptions, attitudes, and concerns related to AI-powered features in food aggregator apps.

Both the quantitative and qualitative analyses' results will need to be integrated with an eye toward taking an integrated view of customer perspectives and deriving actionable insights for food aggregator platforms to improve their AI-driven strategies toward better customer experience.

RESULTS

The following tables summarize the results of this correlation analysis and multiple linear regression analysis. Table 1 shows the correlation matrix between these different factors, and Table 2 shows the model of the significant predictors of customer attitude toward AI-powered features in food aggregator apps.

Table 1: Correlation Matrix of Key Variables

	Awareness	Perceived Usefulness	Ease of Use	Trust	Data Privacy Concerns	Customer Satisfaction
Awareness	1	0.54**	0.47**	0.61**	-0.39**	0.52**
Perceived Usefulness	0.54**	1	0.63**	0.59**	-0.48**	0.78**
Ease of Use	0.47**	0.63**	1	0.52**	-0.41**	0.59**
Trust	0.61**	0.59**	0.52**	1	-0.57**	0.64**
Data Privacy Concerns	-0.39**	-0.48**	-0.41**	-0.57**	1	-0.51**
Customer Satisfaction	0.52**	0.78**	0.59**	0.64**	-0.51**	1

Note: ** p < 0.01

Table 2: Multiple Linear Regression Analysis

Independent Variables	Unstandardized Coefficients	Standardized Coefficients
	B	**Beta**
(Constant)	1.42	
Perceived Usefulness	0.46**	0.34
Ease of Use	0.32**	0.27
Trust	0.24**	0.19
Data Privacy Concerns	-0.38**	-0.42
Prior Experience with AI	0.31**	0.27
R-squared	0.62	
Adjusted R-squared	0.6	

Note: ** p < 0.01

INTERPRETATION & DISCUSSION

In testing the proposed hypotheses, both quantitative and qualitative techniques were used on survey data from 556 respondents.

QUANTITATIVE ANALYSIS

***Correlation Analysis*:**

- The correlation analysis identified the relationships between the various variables of interest in this study: customers' awareness in relation to AI-powered features, perceived usefulness, and perceived ease of use, trust, data privacy issues, and customer satisfaction/loyalty.
- The result of the analysis was a high positive correlation between perceived usefulness of AI-powered features and customer satisfaction: $r = 0.78$, $p < 0.001$, supporting H2.
- Moreover, customer awareness of AI-powered features is strongly related to the level of trust in such technology ($r = 0.61$, $p < 0.001$), thereby supporting H1.

***Regression Modelling*:**

- In order to find out the variables that influence customer attitude and acceptance of AI-powered features, multiple linear regressions were carried out.
- The regression model proved that perceived ease of use and experience with AI in other domains are two significant predictors of customer attitude towards AI-powered features, whereby $\beta = 0.34$, $p < 0.001$ and $\beta = 0.27$, $p < 0.01$, respectively, thus proving H3 and H8.
- However, data privacy concerns had a huge negative effect on customer trust and the willingness to use AI-powered features, thus $\beta = -0.42$, $p < 0.001$, therefore confirming H5.

QUALITATIVE ANALYSIS

Thematic Analysis

The open-ended responses from the survey were read for themes that would come out regarding the subject of customer perception and attitudes towards AI-powered features.

The message that was really the loudest, so to speak, among the rest was that of clarity and interpretability of AI-driven decisions. Customers were interested in a better understanding of how AI algorithms work and why recommendations and order predictions were recommended.

Another strong theme was the need for very real benefits from the AI-powered features to exist in terms of order accuracy and quicker delivery times if their use is to be justified, which comes out in this quote: "If AI-powered features can really improve my ordering experience and save me time, then I'm more likely to use them. Otherwise, with no clear benefit, I'll just stick to the traditional ordering process."

IMPLICATION OF THE STUDY

Notably, the results from the data analysis offer insight into customers' perception and attitude towards AI-powered features in food aggregator apps.

1. ***Awareness and Trust:*** The more knowledgeable customers are about AI-powered features, the greater the tendency for trust in and acceptance of the infusion of AI technology in the food aggregator platform. This thus calls for effective communication and education to have customers better understand AI capabilities.
2. ***Perceived usefulness and perceived ease of use*** are principal factors of the AI-powered features driving customer satisfaction and further use of the food aggregator app. Food aggregator platforms need to work on making AI-driven services user-friendly and easy, explicitly stating all benefits customers can derive.
3. ***Data privacy concerns:*** The numerous concerns stated on the protection of personal data and reliability of AI-driven decision-making procedures strongly hinder customer trust and readiness for engaging with AI-driven features. Thus, food aggregator platforms should address these concerns through transparent data management practices and by demonstrating the robustness and accountability of their AI systems.
4. ***Personalization and Explainability*:** Customers want personalization, but they also want to be told why certain AI-driven recommendations or predictions have been made. Therefore, food aggregator platforms should not only have transparent and

explainable AI-driven services but also provide these in a clear form to the customers for building trust and acceptance.

These findings indicate that food aggregator platforms should adopt a customer-driven approach to their AI integration strategies. By attending to the key factors contributing to customers' perceptions and attitudes, food aggregator platforms can thereby better position themselves to improve the user experience, raise customer satisfaction and loyalty, and hence ensure a long-term successful existence for their AI-powered services.

CONCLUSION

The results of this study provide valuable insights about customer perceptions and attitudes toward using AI-powered features on food aggregator apps in India. Altogether, the findings reveal that customers are generally aware of AI integration in these platforms but exhibit varied knowledge regarding exactly what features and capabilities the technology is associated with. Perceived usefulness, ease of use, and confidence in AI-powered features are presented as factors influencing customer adoption and engagement.

Thus, customers who find the AI features useful for an enriched ordering experience, time-saving, or personalized recommendations have statistically higher chances of being very satisfied with the food aggregator app and continuing utilization of the AI-driven service. The ease of navigation and interactivity with AI features are also important determinants of customer attitude.

However, there are very high concerns about data privacy, with customers expressing reservations on the use of personal information within the AI-driven decision-making processes. Aggregator food delivery platforms must ensure these concerns are taken care of through transparent management of data practices and eliciting the reliability and accountability of its AI systems.

It further states that the concrete benefits of order accuracy and time to delivery created value for the consumers in justifying the adoption and continued usage of the AI-driven features. The platforms should, therefore, deliver such concrete benefits to their customers in order to leverage the user experience and build long-term loyalty.

The generalized finding of this study is that a customer-centric approach takes precedence to technology acceptance pertaining to AI in the food aggregator environment. A clear understanding of and dealing with customer influencers in perceived and actual behaviour stands to allow the unlocking of maximum value of AI-powered features by the food aggregator platforms and will enhance the user experience in meeting the dynamically changing needs and expectations of customers.

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