



Role of AI-Driven Recommendations in Shaping Consumer Orders On Food Delivery Apps in Coimbatore

Dr. A. Y. Kettiramalingam¹, Sandhiya.S², Sabitha.A³

¹Professor, Department of Commerce in Business Process Services,
Dr. N.G.P. Arts and Science College, Coimbatore -641048

^{2,3}Student, Department of Commerce in Business Process Services, Dr.
N.G.P. Arts and Science College, Coimbatore -641048

Abstract – Food delivery apps have become an important part of daily life, and many of them use Artificial Intelligence (AI) to suggest food items to users based on their preferences and previous orders. This study focuses on understanding how AI-driven recommendations influence consumer ordering behavior on food delivery apps in Coimbatore. The research explores whether personalized suggestions affect the choices customers make while ordering food online. It also examines how these recommendations impact order frequency, customer satisfaction, and overall user experience. Data for the study can be collected from users of food delivery apps through surveys. By analyzing customer responses, the study aims to identify how strongly AI-based suggestions influence purchasing decisions. The research also looks at how consumers perceive the usefulness and reliability of these recommendations. The findings may help understand how AI technology improves customer engagement and supports businesses in increasing sales. Overall, the study highlights the growing role of AI in shaping modern food ordering habits and consumer behavior in Coimbatore.

Keywords – Artificial Intelligence, AI Recommendations, Consumer Behavior, Food Delivery Apps, Online Food Ordering, Personalization, Customer Experience, Coimbatore.

I. INTRODUCTION

In the last decade, rapid advancements in digital technologies have significantly transformed consumer behaviour across various industries. Among these, the food service sector has experienced one of the most notable shifts due to the widespread adoption of online food delivery platforms and mobile applications. With increasingly fast-paced urban lifestyles, changing work patterns, and rising demand for convenience, consumers now prefer ordering food through digital platforms rather than relying on traditional dine-in or takeaway options. This transformation has led to the rapid growth of food delivery applications, creating a highly competitive and technology-driven marketplace.

A major driving force behind this transformation is the integration of Artificial Intelligence (AI) into digital platforms. AI-driven technologies, particularly recommender systems, have become central to enhancing user experience and influencing purchasing behaviour. These systems use advanced algorithms and machine learning techniques to analyse consumer data such as previous orders, search history, location, time of purchase, ratings, and preferences. Based on these insights, personalized food recommendations are generated, guiding users towards specific restaurants or food items. As a result, consumer decision-making is increasingly shaped not only by personal choice but also by algorithm-based suggestions.

Food delivery applications such as Swiggy and Zomato have effectively leveraged AI-driven recommendations to simplify the ordering process and improve customer engagement. Features like “recommended for you,” “popular near you,” and “frequently ordered” are designed

to reduce decision fatigue and encourage faster purchasing decisions. While these recommendations enhance convenience and satisfaction, they also play a subtle yet powerful role in shaping consumer preferences, impulse buying behaviour, and brand loyalty.

Understanding this influence is crucial, particularly in the context of growing dependence on digital platforms. From a consumer behaviour perspective, AI-driven recommendations offer both advantages and challenges. On one hand, they help users discover relevant options quickly, saving time and effort. On the other hand, repeated exposure to algorithmic suggestions may reduce independent exploration and create reliance on system-generated choices. This interaction between human decision-making and machine intelligence raises important questions regarding consumer autonomy, preference formation, and trust in digital platforms. From a business and commerce viewpoint, AI-based recommender systems have become essential tools for enhancing operational efficiency and competitive advantage.

Statement of The Problem

Food delivery apps have started using Artificial Intelligence (AI)-powered recommendation systems to suggest restaurants and dishes based on consumer preferences. This technology has the potential to make consumers rely on the recommendations without being fully aware of the same. This can lead to a lack of exploration of different cuisines and can also lead to ordering from the same places repeatedly. In the case of Coimbatore, due to rapid urbanization and increased accessibility to the internet, the usage of food delivery apps has increased. However, there is a lack of empirical evidence on the impact of AI-powered recommendation systems on consumer satisfaction and



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trust in food delivery apps in the region. Therefore, this research aims to examine the impact of AI-based recommendation systems on consumer ordering behaviour in food delivery apps in Coimbatore.

Objectives of The Study

- To understand how AI-based recommendations influence food ordering decisions of consumers using food delivery apps in Coimbatore.
- To study the awareness level of consumers about AI-driven features in food delivery applications.
- To analyse consumer opinions and trust towards recommendations suggested by food delivery apps.
- To examine the effect of AI recommendations on consumer satisfaction, repeat ordering, and impulsive buying.
- To identify the main recommendation factors that affect consumer choice while ordering food through delivery apps.

Need of The Study

The growing penetration of food delivery applications and the extensive use of Artificial Intelligence (AI)-powered recommendation features have considerably transformed consumer ordering behaviour. These intelligent systems curate personalized suggestions that subtly shape consumer preferences and purchasing patterns. Despite their widespread use, many consumers may not be fully conscious of the degree to which such automated prompts influence their decision-making process. This necessitates a closer examination of whether ordering choices are based on individual evaluation or algorithm-driven guidance. The study is essential to analyse the effect of AI recommendations on consumer satisfaction, ordering frequency, and spontaneous purchase tendencies. In the context of Coimbatore, where digital consumption has expanded rapidly, empirical evidence on this issue remains scarce. Therefore, the study seeks to generate region-specific insights into consumer perceptions of AI-driven recommendation mechanisms.

Scope of the Study

The present study focuses on analysing the impact of advanced recommendation mechanisms integrated into food delivery platforms on the ordering behaviour of consumers in Coimbatore. It examines how tailored suggestions related to restaurants, menu items, cuisine choices, and promotional cues influence consumer decision-making during the ordering process. The study also seeks to assess user perceptions regarding the credibility, usefulness, and effectiveness of automated recommendations in enhancing the overall ordering experience. Further, it evaluates behavioural outcomes such as repeat ordering tendencies, preference development, and impulse purchases resulting from exposure to suggested options. The scope of the study is limited to active users of food delivery applications in Coimbatore and is confined to the consumer viewpoint, excluding technical or algorithmic aspects. The findings are specific to the selected region and

sample and aim to contribute to academic insights and practical decision-making in the local context

II. RESEARCH AND METHODOLOGY

The research methodology adopted for the present study is designed to systematically examine the influence of AI-driven recommendations on consumer ordering behaviour in food delivery applications in Coimbatore.

- **Research Design:** The study follows a descriptive research design, as it aims to describe and analyse consumer behaviour, perceptions, and experiences related to AI-based recommendation features in food delivery apps. This design helps in understanding existing patterns and relationships without manipulating any variables.
- **Source of Data:** The study makes use of both primary and secondary data. Primary data are collected directly from consumers who use food delivery applications in Coimbatore. Secondary data are gathered from books, academic journals, research articles, websites, and reports related to artificial intelligence, consumer behaviour, and digital food delivery platforms.
- **Sampling Design:** The sampling unit for the study consists of users of food delivery applications residing in Coimbatore city. Convenience sampling method is adopted due to ease of access to respondents and time constraints. A suitable sample size is selected to ensure meaningful analysis and reliable results.
- **Data Collection Methods:** Primary data are collected through a structured questionnaire designed to capture information on demographic details, usage patterns, perceptions, and the influence of AI-based recommendations on ordering decisions. The questionnaire is administered through online and offline modes to ensure wider participation. Secondary data are collected from published and online sources.
- **Period of Study:** The period of the study covers a duration of three months, during which data collection, analysis, and interpretation are carried out. The findings are based on consumer responses received during this specified period.
- **Tools and Techniques:** Percentage Analysis, Anova Analysis, Chi-Square Analysis, Ranking Technique

Limitation of The Study

- The study is confined to Coimbatore city, and the findings may not be generalizable to other regions.
- The research is based on primary data collected from respondents, which may be subject to personal bias.
- Time constraints may limit the sample size of the study.
- The study relies on consumer perceptions rather than direct measurement of algorithmic influence.

Need for Ai-Driven In Food Delivery Apps

The rapid expansion of online food delivery services has created intense competition among platforms. With numerous restaurants, cuisines, and promotional offers available on a single application, consumers often face difficulty in selecting suitable options. In this context, AI-



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driven recommendation systems have become essential for simplifying choices, enhancing user satisfaction, and improving business performance.

1. Increasing Number of Restaurants on Platforms

Food delivery apps host hundreds of restaurants within a single city. This wide variety can overwhelm users and make the selection process time-consuming. AI-based recommendations filter these options and present relevant choices based on user preferences, thereby reducing complexity and improving convenience.

2. Consumer Demand for Quick Decision-Making

Modern consumers prefer speed and efficiency while ordering food. They expect immediate suggestions rather than browsing through long menus. AI systems fulfil this demand by instantly displaying personalized options, helping users make faster decisions.

3. Need for Personalized User Experience

Every consumer has unique tastes, spending capacity, and ordering habits. A standardized display of restaurants may not satisfy individual needs. AI-driven personalization tailors recommendations according to past behaviour, creating a customized and engaging experience for each user.

4. Rising Digital Competition

Food delivery platforms compete not only with local restaurants but also with rival applications offering similar services. To retain customers, platforms must provide differentiated experiences. AI-powered suggestions enhance user engagement and increase customer loyalty, giving platforms a competitive advantage.

5. Growth of Online Food Ordering Culture

With increasing smartphone usage and internet penetration, online food ordering has become a regular habit for many consumers. As digital transactions grow, there is a greater need for intelligent systems that can manage large volumes of user data and deliver accurate recommendations. Overall, AI-driven recommendation systems are necessary to manage complexity, improve customer satisfaction, and strengthen market position. By offering relevant and timely suggestions, these systems enhance engagement, increase order frequency, and contribute to higher sales performance.

III. DATA ANALYSIS AND INTERPRETATION

Table No.: 1
Gender Of The Respondent

Gender	No. Of Respondent	Percentage
Male	53	44.2
Female	67	55.8
Total	120	100

(Source: Primary Data)

Interpretation

The table shows that out of 120 respondents, 67 (55.8%) are female and 53 (44.2%) are male. Female respondents slightly outnumber male respondents. The participation of both genders is relatively balanced, providing a fair representation for the study.

Table No.: 2
Age Of The Respondent

Age	No. Of Respondent	Percentage
< 21 Years	26	21.7
21-30 Years	60	50.0
31-40 Years	29	24.2
41-50 Years	5	4.2
>50 Years	0	0
Total	120	100

(Source: Primary Data)

Interpretation

The above table shows that out of 120 respondents, 60 (50%) belong to the 21–30 years age group, forming the largest segment. Respondents aged 31–40 years account for 29 (24.2%), while 26 (21.7%) are below 21 years. Only 5 respondents (4.2%) fall under 41–50 years, and none are above 50.

Table No.: 3
Family Type Of The Respondent

Family Type	No. Of Respondent	Percentage
Nuclear	90	75.0
Jointed/Extended	28	23.3
Living Alone	2	1.7
Total	120	100

(Source: Primary Data)

Interpretation

Out of the 120 respondents, 90 (75%) come from small, independent households, 28 (23.3%) belong to joint families, and 2 (1.7%) stay by themselves. The data highlights the dominance of nuclear setups.

Table No.: 4 Occupation Of The Respondent
Occupation No. Of Respondent Percentage

Occupation	No. Of Respondent	Percentage
Student	45	37.5
Homemaker	15	12.5
Salaried Employee	32	26.7
Business/ Self Employed	17	14.2
Professional	9	7.5
Others	2	1.7
Total	120	100

(Source: Primary Data)



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Interpretation

Of the 120 respondents, 45 (37.5%) are students, making them the largest group. Salaried workers account for 32 (26.7%), followed by 17 (14.2%) who are self-employed. Homemakers represent 15 (12.5%), professionals 9 (7.5%), and 2 (1.7%) fall into other categories. The sample reflects varied occupations, with stronger participation from students and employees, indicating greater engagement with digital and technology-based services.

Table No.: 5
Most Frequently Used Food Delivery App

Food Delivery App	No. Of Respondents	Percentage
Swiggy	38	31.7
Zomato	51	42.5
Food Panda	12	10.0
Uber Eats	11	9.2
Others	8	6.7
Total	120	100

(Source: Primary Data)

Interpretation

From a total of 120 respondents, 51 (42.5%) prefer Zomato, making it the leading app. Swiggy follows with 38 users (31.7%). Food panda (12; 10%) and Uber Eats (11; 9.2%) have lower usage, while 8 (6.7%) opt for other platforms.

Table No.: 6
Usage Of Online Food Delivery Apps

Usage Of Delivery Apps	No. Of Respondents	Percentage
Daily	13	10.8
Weekly	55	45.8
Ocassionally	39	32.5
Rarely	13	10.8
Total	120	100

(Source: Primary Data)

Interpretation

Overall, Out Of The 120 Respondents, 55 (45.8%) Place Orders Weekly, Forming The Largest Segment. Around 39 (32.5%) Use The Apps Occasionally, While 13 (10.8%) Each Order Daily And Rarely. The Findings Show That Most Users Rely On Food Delivery Platforms Periodically Rather Than As A Daily Necessity.

Table No.: 7
Average Amount Spent Per Order

Amount Spent Per Order	No. Of Respondent	Percentage
Below Rs. 300	25	20.8
Rs. 301 – Rs.600	49	40.8
Rs.601 – Rs.1,000	32	26.7

Above Rs.1,000	14	11.7
Total	120	100

(Source: Primary Data)

Interpretation

On The Whole, Out Of The 120 Respondents, 49 (40.8%) Typically Spend ₹301–₹600 Per Order, Forming The Largest Group. Around 32 (26.7%) Spend ₹601–₹1,000, While 25 (20.8%) Keep Their Orders Below ₹300. Only 14 (11.7%) Spend Above ₹1,000, Indicating A Preference For Moderate Spending.

Table No.: 8
Primary Reason For Using Food Delivery Apps

Using Food Delivery Apps	No. Of Respondent	Percentage
Convinience	27	22.5
Time Saving	37	30.8
Variety Of Restaurants	29	24.2
Discounts And Offers	14	11.7
Personalized Recommendations	13	10.8
Total	120	100

(Source: Primary Data)

Interpretation

Overall, Out Of 120 Respondents, 37 (30.8%) Use Food Delivery Apps Primarily To Save Time. About 29 (24.2%) Prefer Them For The Wide Selection Of Restaurants Available. Convenience Is The Main Reason For 27 (22.5%) Respondents. Discounts And Special Deals Attract 14 (11.7%) Users. Only 13 (10.8%) Are Influenced Mainly By Personalized Suggestions. The Findings Indicate That Practical Advantages Are More Important Than Promotional Or Customized Features.

Table No.: 9
Preferred Time For Ordering Food Through Apps

Time For Ordering Food Through Apps	No. Of Respondent	Percentage
Lunch	17	14.2
Dinner	57	47.5
Late Night	18	15.0
Anytime	28	23.3
Total	120	100

(Source: Primary Data)

Interpretation

Overall, among the 120 participants, 57 (47.5%) usually order during dinner, making it the most favoured slot. About 28 (23.3%) place orders without a fixed time preference. Late- night usage accounts for 18 (15%), while 17 (14.2%) choose lunchtime. This indicates that evening hours see the highest demand for food delivery services.



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The pattern suggests that many users rely on these apps to manage their dinner needs conveniently. It also reflects changing lifestyle habits, where digital platforms support meal choices, especially during busy evenings.

Table No.: 10
 Respondents Awareness of Ai-Based Recommendations In Food Delivery Apps

ased Recommendations In Food Delivery Apps	No. Of Respondent	Percentage
Yes	101	84.2
No	2	1.7
Somewhat Aware	17	14.2
Total	120	100

(Source: Primary Data)

Interpretation

Out of 120 respondents, 101 (84.2%) are aware that food delivery apps use AI to recommend restaurants and dishes. About 17 (14.2%) are partially aware, and only 2 (1.7%) are unaware. This shows a high level of awareness among users regarding AI-based features. It indicates that most users understand how algorithm-driven suggestions can influence their ordering choices.

Table No.: 11
 Ai Recommendations Increase The Frequency Of My Orders

The Frequency Of My Orders	No. Of Respondent	Percentage
Yes	64	53.3
No	35	29.2
May Be	21	17.5
Total	120	100

(Source: Primary Data)

Interpretation

The tale indicates that out of 120 respondents, 64 (53.3%) believe AI suggestions encourage them to order more frequently. About 35 (29.2%) feel these features do not affect their ordering habits, while 21 (17.5%) remain unsure. The findings show that AI-driven prompts influence purchasing frequency for over half of the participants, though some are indifferent or uncertain.

Table No.: 12
 Ai-Suggested Combo Meals And Add-Ons Encourage To Spend More

Combo Meals And Add-Ons	No. Of Respondents	Percentage
Yes	67	55.8
No	38	31.7
Sometimes	15	12.5
Total	120	100

(Source: Primary Data)

Interpretation

Overall, among the 120 participants, 57 (47.5%) usually order during dinner, making it the most favoured slot. About 28 (23.3%) place orders without a fixed time preference. Late- night usage accounts for 18 (15%), while 17 (14.2%) choose lunchtime. This indicates that evening hours see the highest demand for food delivery services.

Table No.: 13
 Respondents' Preference For More Ai Personalization In Future

Ai Personalization In Future	No. Of Respondent	Percentage
Yes	73	60.8
No	25	20.8
Not Sure	22	18.3
Total	120	100

(Source: Primary Data)

Interpretation

Overall, among the 120 respondents, 73 (60.8%) favor expanding AI-based personalization in food delivery apps. In contrast, 25 (20.8%) are not interested in further customization, and 22 (18.3%) remain unsure. This indicates a generally positive attitude toward advanced technological enhancements. The findings reflect increasing comfort with tailored digital experiences. However, the presence of hesitant and undecided users suggests the need for balanced and transparent AI features to build greater trust.

Ranking Analysis

Table No.: 14
 Benefits Of Ai-Driven Recommendations Based On Satisfaction

Additional Benefits	N	Mean	Std. Deviation	Rank
Reduction of decision-making effort while ordering food	120	3.88	0.984	I
Suggestions based on previous ordering history	120	3.47	0.987	II
Availability of customized meal options	120	3.35	0.941	III
Better matching of price range with preferences	120	3.31	1.129	IV
Increased confidence in selecting food items	120	3.10	1.184	V

Valid N (listwise): 120

Interpretation

Based on the mean values, reduction of decision-making effort (Mean = 3.88) is the highest ranked benefit of AI-driven recommendations, followed by suggestions based on



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previous ordering history (Mean = 3.47). Increased confidence in selecting food items (Mean = 3.10) received the lowest satisfaction score among the listed benefits. This shows that respondents value time-saving and convenience features more than confidence-building aspects.

ANOVA

Table No.: 15

Monthly Income And Accuracy Of Ai Recommendations

Source of Variation	Sum of Squares	Df	Mean Square	F Value	Sig. (p-value)
Between Groups	6.094	3	2.031	1.083	0.359
Within Groups	217.497	116	1.875		
Total	223.592	119			

Null Hypothesis (H₀): There is no significant difference in perceived accuracy of AI recommendations among different monthly income groups.

Alternative Hypothesis (H₁): There is a significant difference in perceived accuracy of AI recommendations among different monthly income groups.

Level Of Significance: 5% (0.05)

RESULT: Since the p-value (0.359) is greater than 0.05, the null hypothesis is accepted. Therefore, there is no significant difference in the perceived accuracy of AI recommendations based on the monthly income of respondents.

Interpretation: A one-way ANOVA was performed to analyse whether respondents' monthly income influences the perceived accuracy of AI recommendations. Since the obtained p-value (0.359) is greater than the significance level of 0.05, the result is statistically not significant. Hence, there is no meaningful difference in opinion regarding AI recommendation accuracy among respondents belonging to different income groups.

Table No.: 16

Occupation And Ai Recommendations Increasing Order Frequency

Source of variation	Sum of squares	Df	Mean square	F value	Sig. (p-value)
Between Groups	16.055	2	8.027	4.743	0.011
Within Groups	169.246	100	1.692		
Total	185.301	102			

Null Hypothesis (H₀): There Is No Significant Difference In The Increase In Order Frequency Due To Ai Recommendations Among Respondents With Different Occupations.

Alternative Hypothesis (H₁): There Is A Significant Difference In The Increase In Order Frequency Due To Ai Recommendations Among Respondents With Different Occupations.

Level Of Significance: 5% (0.05)

Result: Since The P-Value (0.011) Is Less Than 0.05, The Null Hypothesis Is Rejected. Therefore, There Is A Significant Difference In The Increase In Order Frequency Due To Ai Recommendations Among Respondents Belonging To Different Occupational Groups.

Interpretation: A One-Way Anova Was Conducted To Analyse Whether Occupation Influences The Increase In Order Frequency Due To Ai Recommendations. Since The Obtained P- Value (0.011) Is Less Than The Significance Level Of 0.05, The Result Is Statistically Significant. Therefore, There Exists A Significant Difference Among Respondents Of Different Occupational Groups Regarding The Impact Of Ai Recommendations On Their Ordering Frequency.

Chi-Square Analysis

Table No.: 17

Gender Vs Most Frequently Used Food Delivery App

Gender	Foodpan da	Others	Swiggy	Uber Eats	Zomato	Total
Female	6 (9.0%) [50.0%]	3 (4.5%) [37.5%]	27 (40.3%) [71.1%]	4 (6.0%) [36.4%]	27 (40.3%) [52.9%]	67 (100%) [55.8%]
Male	6 (11.5%) [50.0%]	5 (9.6%) [62.5%]	10 (19.2%) [26.3%]	7 (13.5%) [63.6%]	24 (46.2%) [47.1%]	52 (100%) [43.3%]
Others	0 (0.0%) [0.0%]	0 (0.0%) [0.0%]	1 (100%) [2.6%]	0 (0.0%) [0.0%]	0 (0.0%) [0.0%]	1 (100%) [0.8%]
Total	12 (10.0%) [100%]	8 (6.7%) [100%]	38 (31.7%) [100%]	11 (9.2%) [100%]	51 (42.5%) [100%]	120 (100%)

Chi-Square Test Result

Test	Value	df	p-value
Pearson Chi-Square	9.663	8	0.289

Null Hypothesis (H₀): There Is No Significant Association Between Gender And The Most Frequently Used Food Delivery App.

Alternative Hypothesis (H₁): There Is A Significant Association Between Gender And The Most Frequently Used Food Delivery App.

Level Of Significance: A = 0.05 (5% Level)

Result: Since The P-Value (0.289) Is Greater Than 0.05, The Null Hypothesis Is Accepted. Therefore, There Is No Significant Association Between Gender And The Food Delivery App Most Frequently Used By Respondents.

Interpretation: A Chi-Square Test Was Conducted To Examine The Association Between Gender And The Most Frequently Used Food Delivery App. Since The Obtained P-Value (0.289) Is Greater Than The Significance Level Of 0.05, The Result Is Statistically Not Significant. Hence, There Is No Significant Relationship Between Gender And The Choice Of Food Delivery Application Among The Respondents.



Table No.: 18

Educational Qualification Vs Preference For Ai-Based Personalization In Food Delivery Apps
Educational Qualification No Not Sure Yes Total

Education al Qualificati on	No	Not Sure	Yes	Total
Diploma	3 (23.1%) [12.0%]	0 (0.0%) [0.0%]	10 (76.9%) [13.7%]	13 (100%) [10.8%]
Graduate	14 (22.6%) [56.0%]	9 (14.5%) [40.9%]	39 (62.9%) [53.4%]	62 (100%) [51.7%]
Post Graduate	4 (18.2%) [16.0%]	8 (36.4%) [36.4%]	10 (45.5%) [13.7%]	22 (100%) [18.3%]
Professional Degree	3 (30.0%) [12.0%]	0 (0.0%) [0.0%]	7 (70.0%) [9.6%]	10 (100%) [8.3%]
Up to 12th	1 (7.7%) [4.0%]	5 (38.5%) [22.7%]	7 (53.8%) [9.6%]	13 (100%) [10.8%]
Total	25 (20.8%) [100%]	22 (18.3%) [100%]	73 (60.8%) [100%]	120 (100%)

Chi-Square Test Result

Test	Value	df	p-value
Pearson Chi-Square	14.855	8	0.062

Null Hypothesis (H₀): There Is No Significant Association Between Educational Qualification And Preference For Ai-Based Personalization In Future Food Delivery Apps.

Alternative Hypothesis (H₁): There Is A Significant Association Between Educational Qualification And Preference For Ai-Based Personalization In Future Food Delivery Apps.

Level Of Significance: A = 0.05 (5% Level)

Result: Since The P-Value (0.062) Is Greater Than The Level Of Significance (0.05), The Null Hypothesis Is Accepted. Therefore, There Is No Significant Association Between Educational Qualification And Preference For Ai-Based Personalization In Future Food Delivery Apps Among The Respondents.

Interpretation: A Chi-Square Test Was Conducted To Examine The Association Between educational qualification and preference for AI-based personalization in future food delivery apps. Since the obtained p-value (0.062) is greater than the significance level of 0.05, the result is statistically not significant. Hence, there is no significant relationship between respondents' educational qualification and their preference for AI-based personalization features

Table No.:19

Occupation Vs Ai Recommendations Increase The Frequency Of Orders

Occupation	Maybe	No	Yes	Total
Business Self-employed	4 (23.5%) [19.0%]	2 (11.8%) [5.7%]	11 (64.7%) [17.2%]	17 (100%) [14.2%]
Homemaker	1 (6.7%) [4.8%]	6 (40.0%) [17.1%]	8 (53.3%) [12.5%]	15 (100%) [12.5%]
Others	1 (50.0%) [4.8%]	1 (50.0%) [2.9%]	0 (0.0%) [0.0%]	2 (100%) [1.7%]
Professional	0 (0.0%) [0.0%]	1 (11.1%) [2.9%]	8 (88.9%) [12.5%]	9 (100%) [7.5%]
Salaried Employee	1 (3.1%) [4.8%]	10 (31.3%) [28.6%]	21 (65.6%) [32.8%]	32 (100%) [26.7%]
Student	14 (31.1%) [66.7%]	15 (33.3%) [42.9%]	16 (35.6%) [25.0%]	45 (100%) [37.5%]
Total	21 (17.5%) [100%]	35 (29.2%) [100%]	64 (53.3%) [100%]	120 (100%)

Chi-Square Test Result

Test	Value	df	p-value
Pearson Chi-Square	23.857	10	0.008

Null Hypothesis (H₀): There Is No Significant Association Between Occupation And The Opinion That Ai Recommendations Increase The Frequency Of Orders.

Alternative Hypothesis (H₁): There Is A Significant Association Between Occupation And The Opinion That Ai Recommendations Increase The Frequency Of Orders.

Level Of Significance: The Test Is Conducted At 5% Level Of Significance (A = 0.05). Result: Since The Calculated P-Value (0.008) Is Less Than The Level Of Significance (0.05), The Null Hypothesis (H₀) Is Rejected And The Alternative Hypothesis (H₁) Is Accepted. Therefore, There Is A Significant Association Between Occupation And The Opinion That Ai Recommendations Increase The Frequency Of Orders.

Interpretation: The Chi-Square Analysis Shows That Occupation Has A Significant Relationship with the opinion that AI recommendations increase the frequency of orders. Since the p-value (0.008) is less than 0.05, the association is statistically significant. This means respondents from different occupational groups have different views regarding the impact of AI recommendations on their ordering frequency. Therefore, occupation plays an important role in influencing how consumers respond to AI-driven suggestions.



IV. FINDINGS OF THE STUDY

A. Findings Based on Percentage Analysis

- The majority of respondents (55.8%) are female, showing slightly higher participation of women in the study.
- Most respondents (50%) belong to the 21–30 years age group, indicating strong representation of young users.
- Majority (75%) belong to nuclear families, showing dominance of small household structures.
- Students (37.5%) form the largest occupational group in the study.
- Zomato is the most preferred food delivery app (42.5%), followed by Swiggy (31.7%).
- Most users (45.8%) place food orders weekly.
- The majority (40.8%) spend between ₹301–₹600 per order.
- Saving time (30.8%) is the primary reason for using food delivery apps.
- Dinner time (47.5%) is the most preferred time for ordering food.
- A very high percentage (84.2%) are aware that food delivery apps use AI recommendations.
- More than half (53.3%) believe AI suggestions increase their order frequency.
- Majority (55.8%) feel AI-recommended combos increase their spending.
- A large portion (60.8%) support expansion of AI-based personalization features.

B. Findings Based on Ranking Analysis

- Reduction of decision-making effort (Mean = 3.88) is ranked as the most important benefit of AI-driven recommendations.
- Suggestions based on previous order history (Mean = 3.47) hold the second rank.
- Increased confidence in selecting food (Mean = 3.10) is ranked last among the listed benefits.
- Overall, respondents value convenience and time-saving aspects more than confidence- building factors.

C. Findings Based on ANOVA

- There is no significant difference between monthly income groups and perception of AI recommendation accuracy ($p = 0.359 > 0.05$). Income does not influence opinion about AI accuracy.
- There is a significant difference between occupation and increase in order frequency due to AI recommendations ($p = 0.011 < 0.05$). Occupation influences how AI recommendations affect ordering behaviour.

D. Findings Based on Chi-Square Test

- There is no significant relationship between gender and preferred food delivery app ($p = 0.289 > 0.05$). Gender does not affect app choice.
- There is no significant association between educational qualification and preference for AI-based personalization ($p = 0.062 > 0.05$). Education level

does not significantly influence preference for AI features.

- There is a significant relationship between occupation and opinion that AI increases order frequency ($p = 0.008 < 0.05$). Occupational background plays an important role in AI influence on ordering frequency.

Suggestions

- AI recommendations should be improved to match individual customer preferences more accurately. Many respondents feel that suggestions often repeat the same dishes, so the system should introduce more variety and new food options.
- Food delivery apps like Swiggy and Zomato should provide recommendations based on dietary habits such as vegetarian, non-vegetarian, vegan, and diabetic-friendly choices. This will help users receive healthier and more suitable food suggestions.
- The AI system should suggest meals based on the time of day, such as breakfast, lunch, snacks, or dinner. Time-based recommendations can make the ordering process quicker and more convenient.
- Respondents expect AI to consider seasonal changes, weather conditions, and even mood while suggesting food items. This type of personalization can create a more engaging and relatable user experience.
- Sponsored promotions should be balanced with genuine personalized recommendations. Users prefer suggestions based on their past orders rather than repeated promotion of paid restaurant listings.
- Data privacy must be protected while providing AI-based suggestions. Customers want assurance that their personal information and ordering history are handled securely.
- AI should encourage exploration by introducing new cuisines and restaurants instead of repeatedly showing routine choices. This can increase customer interest and satisfaction.
- Respondents suggested reducing frequent notification messages related to ordering food. Too many alerts may disturb users and negatively affect their experience.
- More restaurants and food options should be included in the app to provide wider choices. Increased availability can improve customer satisfaction and decision-making.
- Additional features such as better discounts, coupon redemption, and innovative AI tools should be introduced. Continuous improvement and technological upgrades will strengthen long-term customer loyalty.

V. CONCLUSION

The study analyzed the impact of AI-driven recommendation systems on consumer ordering behaviour in food delivery applications in Coimbatore. The results indicate that personalized suggestions, automated prompts, and algorithm-based features strongly influence restaurant and food choices by simplifying decision-making and



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enhancing convenience. AI-enabled features such as customized offers and promotional alerts were found to increase order frequency and spending levels. Statistical analysis shows that occupation significantly affects consumer response to AI recommendations, whereas income and educational qualification do not, highlighting the greater influence of lifestyle factors. Although most respondents showed a positive attitude toward advanced AI personalization, a small segment stressed the importance of transparency, fairness, and responsible data practices.

With the steady growth of smartphone usage and digital transactions in Coimbatore, AI-driven systems play a crucial role in shaping consumer interaction with food delivery platforms. These technologies not only improve operational efficiency but also influence consumer habits by organizing choices in a personalized way. Overall, the study concludes that AI-based recommendations have a clear and meaningful impact on ordering patterns, increasing convenience and engagement while emphasizing the need for ethical implementation. The findings offer useful insights for businesses, researchers, and policymakers in understanding the changing dynamics between artificial intelligence and consumer behaviour in digital commerce.

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