Final Report: Understanding Consumer Awareness and Trust in AI-Powered Marketing Tools

Name: Mallory Wright
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Executive Summary

The research examines consumer interactions with artificial intelligence in marketing through their understanding of AI recommendation systems and their experience with chatbots. The research holds significance because AI technology now plays a major role in customer interactions through product recommendation systems and customized content delivery and question response functions (Statista, 2024). The success of these tools depends on consumer comfort levels and their understanding of AI technology.

The research combines Pew Research and Statista secondary data with simulated dataset primary data. Pew Research data shows that American consumers understand AI applications in online shopping but lack understanding about its usage in different contexts (Pew Research Center, 2023). The primary data revealed that 61% of participants recognized AI in product recommendation systems. The analysis of cross-tabulation data revealed that people who knew more about chatbots also demonstrated better understanding of AI applications in marketing. The weak negative correlation ($r = –0.10$) indicates no direct linear connection exists between the variables. Marketers should not make assumptions about consumer understanding or trust because exposure to AI tools does not automatically lead to these outcomes.

Marketers should enhance their practices by making AI usage more transparent while providing educational content to consumers. Marketers should use clear design and ethical practices along with labeling AI tools and opt-in options to establish trust and bridge the knowledge gap between consumers (Brown & Suter, 2014)

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Introduction

Artificial intelligence applications in marketing have expanded quickly through personalized recommendations and automated customer service systems. Brands that use AI tools such as chatbots and recommendation algorithms must understand consumer awareness and trust levels to achieve successful adoption and engagement (Pew Research Center, 2023).

The study examines how well consumers understand AI tools that exist in the market. The study examines the difference between AI marketing presence and consumer understanding of AI through survey data analysis and primary research simulation. The research aims to create valuable insights which will help marketers improve their communication methods and increase transparency to achieve better AI implementation.

AI marketing technologies have already started transforming consumer-brand interactions in the present day. Many consumers fail to detect when AI systems interact with them (Pew Research Center, 2023). Marketers need to understand where confusion or mistrust exists so they can develop strategies that educate and empower users instead of alienating them.

The integration of AI technologies into mobile apps and voice assistants and digital ad targeting continues to merge traditional experiences with AI-enhanced ones. Research must address both usage data and consumer sentiment because of the current urgent need. Marketers who understand consumer awareness and familiarity with AI can develop strategies that build long-term brand trust through ethical and inclusive approaches (Brown & Suter, 2014).

Research Questions and Data Sources

Research Questions

1. How aware are consumers of AI-powered marketing tools (e.g., product recommendations)?
2. Does chatbot familiarity influence awareness or trust in AI?
3. What trends exist in consumer comfort with AI use in marketing?

Data Sources

- **Secondary Data:**
    - Pew Research (2023): *Public Awareness of Artificial Intelligence in Everyday Activities*
    - Statista (2024): *US Generative AI Market Size and Adoption by Marketers*

- **Primary Data (Simulated):**
    - Variables: AI awareness, chatbot familiarity
    - If collecting primary data: Surveys would be used to measure perceptions, awareness, and attitudes toward AI features in marketing (e.g., "How familiar are you with chatbots?" or "Do you trust product recommendations made by AI?").

Data Source & Method

Dataset Description The primary dataset used in this study was simulated using Excel, mimicking responses from 244 participants. It included responses to survey-style questions, such as level of chatbot familiarity and awareness of AI in marketing tools.

Original Data Collection Method While simulated, the structure mirrors real-world survey research. If this were a real-world project, data would be collected via online surveys targeting adult consumers with recent digital shopping experience. Questions would use Likert scales (1–4) to measure familiarity, awareness, and comfort (Brown & Suter, 2014).

Sampling and Measurement Convenience sample of 244 respondents. Key categorical variables included chatbot familiarity (ordinal: not familiar to very familiar) and AI awareness (binary: yes/no). The project used Excel to code, clean, and analyze the data, following textbook guidelines on measurement and sampling (Brown & Suter, 2014).

Respondents were segmented into four levels of chatbot familiarity to enable comparison. This segmentation allowed us to explore the relationship between exposure to chatbot technology and perceived awareness of broader AI tools. By aligning variables with real-world behaviors (such as using chatbots on retail sites or mobile apps), I ensured that the insights reflect practical marketing scenarios.

Data Analysis & Findings

Descriptive Statistics:

- Mean chatbot familiarity score: 2.66 (on a 1–4 scale)
- 61% of respondents reported awareness of AI in product recommendations

Cross-tabulation: Chatbot Familiarity vs. AI Awareness

Chatbot Familiarity	Aware of AI	Not Aware	% Aware
Not Familiar	9	16	36.0 %
Somewhat Familiar	44	30	59.5 %
Familiar	60	37	61.9 %
Very Familiar	27	6	81.8 %

Interpretation: Familiarity appears to correlate with awareness, but not in a strongly linear fashion.

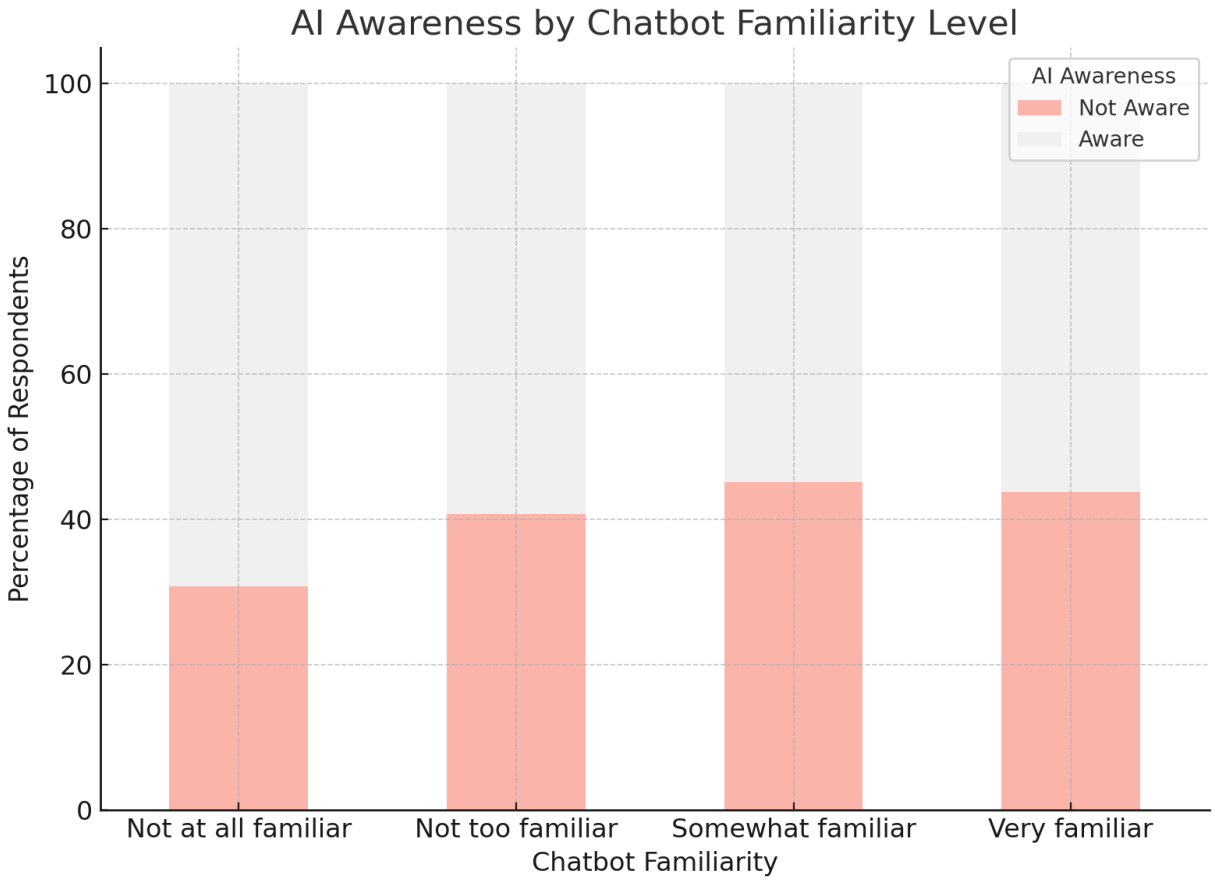
Correlation Analysis:

- Pearson correlation coefficient **r = −0.10**

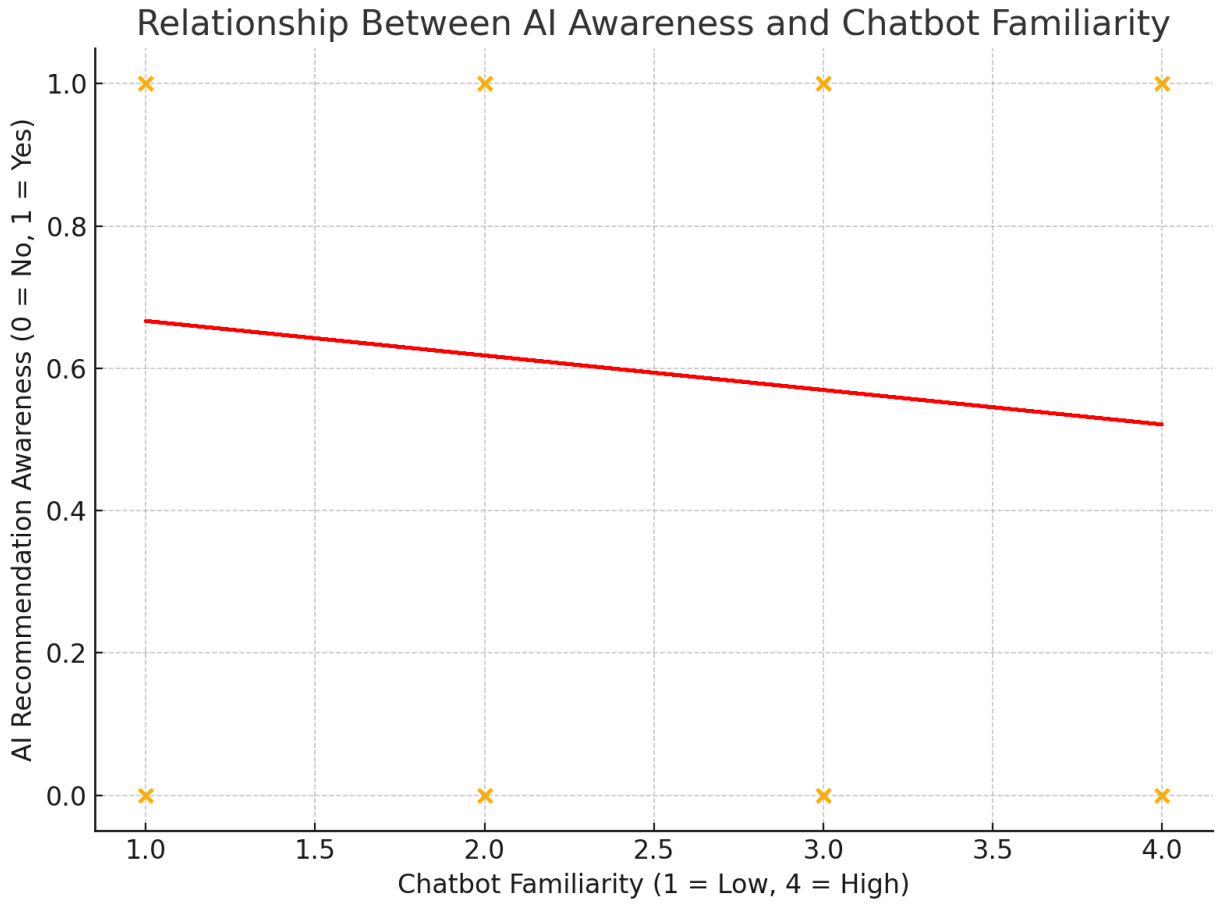
  Interpretation: Very weak negative correlation; there's no meaningful linear relationship between chatbot familiarity and AI awareness.

Visuals:

- **Bar Chart:** AI Awareness by Chatbot Familiarity
  - *Caption:* Respondents who are more familiar with chatbots tend to report greater awareness of AI being used in product recommendations. However, awareness decreases among those less familiar with chatbot technology, suggesting a potential link between experience with AI tools and recognition of their use in marketing.



- **Scatterplot:** Relationship Between AI Awareness and Chatbot Familiarity
    - *Caption:* This scatterplot illustrates a very weak negative relationship between chatbot familiarity and AI awareness. As chatbot familiarity increases, awareness of AI in product recommendations slightly declines. However, the correlation is not strong, indicating no meaningful linear relationship in this sample.



Interpretation & Recommendations

The data suggests that while consumers may frequently engage with AI-driven tools like chatbots, they do not always understand these tools to be AI-powered or understand how they influence their experience (Pew Research Center, 2023). This gap in understanding presents both challenges and opportunities for marketers.

Recommended Actions:

1. **Improve transparency:** Add labels like "Powered by AI" so consumers can be aware when AI is being used.
2. **Provide human alternatives:** Allow customers to opt out of AI tools or access live agents easily to build trust.
3. **Educate users:** Through onboarding or promotional content, explain how AI tools benefit consumers (e.g., faster service, better recommendations) (Brown & Suter, 2014).

Marketers should use A/B testing to determine how AI labeling impacts consumer engagement and satisfaction in addition to these actions. User behavior tracking before and after AI exposure will provide more detailed information about how AI tool knowledge affects consumer choices. Companies need to match their AI implementation with their brand values to prevent alienating customers who view AI as impersonal or manipulative.

I would recommend to a brand that they conduct market research on a continuous basis to track changing perceptions and evaluate the effectiveness of education campaigns in building trust and comfort with AI.

Conclusion

The marketing industry undergoes transformation through artificial intelligence yet consumer understanding of these changes remains behind the rapid pace of technological advancement (Statista, 2024). People easily identify AI when it is explicitly marked in product recommendations yet they remain unaware of hidden applications such as chatbots and personalization engines. The research indicates that people become more aware of AI as they gain experience but this awareness does not create a clear or consistent pattern. Marketers should avoid making the assumption that consumer engagement with AI automatically leads to understanding.

Brands should dedicate resources to transparency initiatives and choice options and educational programs which will empower customers to feel informed instead of confused or skeptical when they encounter AI. The implementation of these strategies will enhance both trust levels and the overall success of AI-powered marketing initiatives.

Companies that adopt ethical AI design principles and explain their processes and actively seek consumer feedback will establish stronger and more trusted relationships with their customers. The research provides essential knowledge about how consumer education promotes better success rates for AI-powered tools in business markets.

References

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