

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON BRAND SAFETY AND CONSUMER TRUST: A STUDY OF TARGET AUDIENCE PERCEPTION

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Abstract:

Artificial Intelligence (AI) has seen great adoption in marketing and brand communication which in turn has changed how companies interact with consumers. While AI brings to the table personalization, automation, and enhanced customer engagement, it also brings in issues of brand safety and consumer trust. Many consumers are still very much at arm's length with what is put forth by AI in terms of issues like generation of false content, spread of misinformation, algorithmic bias, exaggerated AI claims (AI washing) and also due to the lack of regulatory structure.

This study aims to explore the effect of the use of AI on brand safety and consumer trust from the viewpoint of the target respondents. Primary data were collected using a structured questionnaire and were distributed to respondents that routinely engage with AI-integrated platforms. This study focuses on how the ethical use of AI, along with transparency and responsible communication, affects consumer trust and perceptions of brands.

AI reports that we see that while there is a great chance for AI to improve brand value it also puts at risk trust and brand image with poor or unethical use. Transparency, ethical conduct and proper regulation is key in tooting down brand safety issues and in building up consumer confidence. The study also brings to light the issue of companies' role in putting in place responsible AI practices which is vital to its long term customer trust and protection of brand reputation in the growing digital space.

Keywords: *Artificial Intelligence in Marketing, Brand Safety, Consumer Trust, Ethical AI, AI Transparency, Responsible AI Practices, Algorithmic Bias, AI Washing*

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Introduction:

Artificial Intelligence (AI) has transformed into a key element in today's marketing and advertising which in turn enables brands to put out personalized content, automate communication, and improve customer engagement. While these tech solutions bring about efficiency and innovation, they also present very serious issues related to brand safety and consumer trust. We see that a great issue with AI in advertising is content mis generation and misinformation.

AI systems may put out inaccurate or misleading info which in turn damages brand credibility and also confuses consumers. Also we have algorithmic bias which is a issue where AI algorithms may play fair and square which in turn causes brand (in)visibility and a perception of manipulation. Also the increasing practice of AI washing in which brands blow out of proportion their use of AI to appear at the technological forefront which in turn misleads consumers and weakens trust when such claims are put under the microscope.

Also we see that which present regulatory structures and ethical rules are not well defined this is to blame for increased perception risks related to data privacy, transparency and account ability. Also it is put forth that often consumers are not aware of what AI is doing in ads and what is done with their data which in turn leads to doubt and reduced confidence in AI based brands. In this context it is very much so to look at what is it that consumers truly trust in brands which are using AI in their ads and also if it is ethical to use AI without informing the consumers. This study we put out to study the issue of AI use in terms of brand safety and consumer trust which we put forward is very much the importance of transparency and responsible AI practices.

Statement of Problem:

It is as though a race is occurring between the growing penetration of AI in advertising and brand messages, and the slow understanding and belief of AI technology by the consumers. Advertising driven by AI offers a range of possibilities of innovation and efficiency; but also of potential risk for consumers and a direct threat to brand credibility and safety.

Consumers may receive an AI-driven advertisement without explicit disclosure of the use of AI in advertisement creation and targeting, which leads to various concerns in terms of misinformation, biased exposure to brands, overstated functionality of AI, and uncertainty in terms of poor regulation, thus could produce discrepancies in expectations versus reality and undermine brand trust even if AI is legitimately applied.

The crucial issue is that it is not known exactly how these AI driven practices affect consumer judgment. Knowing whether audiences trust AI driven ads or not, feel deceived by them or simply indifferent toward them is important to the brand in order to avoid having negative impact on their brand and future relationship. So we should look into how the application of AI in advertising impacts on brand safety, and is honest and transparent AI a must- have to maintain consumer trust?

Limitations:

1. Limited sample size

The study is based on a small number of respondents, which may limit how much the findings apply to a broader population.

2. Geographical constraint

Data was collected from respondents in a specific geographical area. As a result, the findings may not completely reflect the views of consumers from other regions or cultural backgrounds.

3. Perception-based responses

The study depends on what respondents say about their own opinions and perceptions. These responses might be affected by personal bias, mood, or individual experiences instead of actual behavior.

4. Lack of focus on a specific brand or industry

Since the research does not focus on a specific brand or product category, the findings show general consumer views and may not highlight differences in how AI is used across industries.

5. Time constraints

The study took place over a short period, which limited the amount of data collected and the depth of analysis.

6. Rapidly evolving AI landscape

AI technologies and regulations are always changing. As a result, the findings of this study may become less relevant over time as new developments arise.

Objectives:

- The study examines the negative effects of AI-generated misinformation and false content errors on customer trust (namely how they affect a company's brand credibility or reliability).
- What influence does algorithmic bias have on the brand visibility of a businessman? Is it making certain brands come up more often than others via biased algorithms, and thus giving consumers their own good reason for feeling that things just aren't fair...
- Understand “AI washing” from a consumer perspective. That is, even though a company claims to use cutting-edge technology it might in fact be using the advanced AI technique only to bolster its image rather than providing any real value; also understand whether these practices affect brand originality and trustworthiness.
- The next task is to identify the prevailing regulatory and ethical issues surrounding AI technology.

Hypotheses of the Study:

Null Hypotheses (H_0)

H_{01} : There is no significant relationship between the use of Artificial Intelligence in advertising and consumer trust in brands.

H_{02} : Content misgeneration and misinformation created through AI do not have a significant impact on brand safety perception.

H_{03} : Algorithmic bias does not significantly influence brand visibility or consumer trust.

H_{04} : AI washing practices do not have a significant effect on consumer perception of brand credibility.

H_{05} : Regulatory and ethical concerns related to AI usage do not significantly affect consumer trust in brands.

H_{06} : Transparency about the use of AI in advertisements does not significantly influence consumer trust.

Alternative Hypotheses (H_1)

H_{11} : The use of Artificial Intelligence in advertising has a significant impact on consumer trust in brands.

H_{12} : Content misgeneration and misinformation generated by AI negatively affect brand safety perception.

H_{13} : Algorithmic bias significantly influences brand visibility and consumer trust.

H_{14} : AI washing practices negatively affect consumer perception of brand credibility.

H_{15} : Regulatory and ethical concerns related to AI usage significantly influence consumer trust in brands.

H_{16} : Transparency about the use of AI in advertisements positively influences consumer trust.

Review of Literature:

To enhance this personalization, automation and customer engagement — AI has been increasingly adopted in the marketing and advertising space. While prior interdisciplinary research indicates that live-agent interfaces (Chatbots) and algorithmic product recommendation systems serve as beneficial AI- based tools to improve overall marketing efficiency, they should be employed responsibly and transparently.

The literature points to content misgeneration and misinformation as the most significant risks of AI-generated advertising. False or misleading information generated by AI can harm brand reputation and lower consumer trustworthiness. Researchers say those types of mistakes lead to

The literature has also examined the phenomenon of AI washing, where brands exaggerate their use of AI to appeal to consumers. Studies show that misleading claims from AI can hurt brand authenticity and generate long-term trust issues.

In addition, scholars highlight regulatory and perception risks tied to the use of AI, particularly as they pertain to data privacy, transparency, and accountability. The absence of clear legislation only adds to consumer hesitancy to AI-powered adverting.

While existing studies take on AI adoption and ethical issues, few focus directly on their collective influence over brand safety and consumer trust. This exemplifies the gap in research on this subject.

Research Methodology:

This paper uses a descriptive research design to examine consumer perception of Artificial Intelligence use in advertisement and influence on brand safety with customer trust. This study employs a quantitative approach and collects primary data using an online questionnaire tool in Google Forms. The respondents were chosen through convenience sampling, focusing on consumers who saw AI-initiated advertising. Basic statistical tools, percentage analysis and mean scores in the collected data were analyzed by using Microsoft Excel. Respondent confidentiality was maintained throughout the study.

Objective of the test:

One reason behind using the Z-test along with ANOVA here? To check if average numbers really differ, while also judging whether earlier guesses hold up under number-based scrutiny. When averages need comparison - say, one group versus an entire population - the Z-test steps in, especially useful when lots of data exist or variation levels are already clear. This method weighs real shifts against random luck. On another note, ANOVA handles multiple group averages at once, measuring how much groups stray from each other compared to changes inside each group alone. These tools, working side by side, create a steady path through uncertainty, sharpening conclusions so results rest on something solid.

AANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	95.35501	1	95.35501	134.1891	8.78E-23	3.901761
Within Groups	110.8538	156	0.710602			
Total	206.2089	157				

Z-Test Results

Question (Short Form)	Mean	Std Dev	Z Value	Interpretation
AI Interaction Frequency	3.90	0.98	8.25	Significant Positive
AI Awareness	4.33	0.65	18.19	Highly Significant Positive
Identify AI Content	2.51	0.53	-8.27	Significant Negative
AI Ads Authentic	3.26	0.99	2.37	Significant Positive
AI Makes Brand Advanced	3.89	0.81	9.79	Significant Positive
AI Risk of Fake Content	2.66	0.57	-5.27	Significant Negative
AI Protects Reputation	4.09	0.81	11.94	Highly Significant Positive
Trust AI Brands	2.35	0.68	-8.59	Significant Negative
Automation Reduces Emotion	3.62	0.88	6.29	Significant Positive
Purchase Likelihood	3.28	0.81	3.03	Significant Positive

Interpretation Summary:

Most people in the study noticed how brands now use Artificial Intelligence in ads and outreach efforts. It seems smarter to them when companies apply these tools - giving off a sense of being up-to-date with new tech. Still, not everything feels settled. A few individuals hesitated, doubting whether messages made by machines truly reflect honesty or creativity. They wonder if something crafted without hands can carry real meaning. Yet data suggests shoppers tend to buy more when suggestions feel tailored, especially through quick replies or smart choices offered automatically. Few seem at ease with how distant things feel when machines take over too much, since warmth fades between company and person. Still, opinions land somewhere in the middle - speed and progress get nods, yet honesty, realness, and feeling heard matter just as much when talking to brands.

Conclusion

More ads now use artificial intelligence, changing how companies talk to customers. Even though machines can tailor messages fast, people are slow to believe in them completely. Some see clever tech at work, yet worries stick around - like wrong details showing up, hidden slants in choices, fake claims about smarts, and rules missing entirely. Trust builds slowly when unclear who's really behind what gets shown.

Wrong info from AI, along with slanted decision rules, tends to chip away at how much people believe in a brand. Overstating what AI actually does often makes companies seem less genuine. When clarity goes missing, when full facts stay hidden, doubts grow stronger. Trust takes hits as suspicion creeps in without openness.

Truth is, AI boosts brand worth if handled with care. When firms choose honesty over shortcuts, people notice. Clear messaging matters more than clever tricks. Fairness builds loyalty, slowly. Rules exist for a reason - ignoring them risks everything. Trust slips fast when transparency fades. How a company acts today shapes how it's seen tomorrow. Digital change won't slow down, so staying grounded helps. Reputation grows in silence,

through consistent choices. Mistakes happen, but owning them counts. The real test lies in everyday decisions, not grand promises.

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