A study on AI in Neuromarketing strategies of Tata Motors in Promoting Electronic Vehicles

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Abstract

In the modern era where emotional connection mostly drives purchasing decisions rather than logic, understanding how brands tap into consumer psychology is more important. This study explores how Tata Motors uses artificial intelligence in neuromarketing strategies and also studies various tools and techniques that tap into subconscious emotions to promote its range of electric vehicles (EVs) in India. By analysing how design choices, storytelling, immersive retail experiences, and digital personalization shape consumer perceptions, this paper uncovers the emotional blueprint behind Tata's EV marketing success. The study doesn't just describe these strategies but also evaluates their actual influence on consumer trust, brand recall, and purchase intention. Through a blend of secondary data, real-world case examples, and campaign analysis, the research highlights how Tata's approach not only informs but emotionally engages customers. This paper ultimately offers fresh insights into how neuromarketing, when used effectively, can help overcome barriers like hesitation over E vehicles, range anxiety, and unfamiliarity that was turning a futuristic product into a trusted everyday choice.

Keywords: Artificial Intelligence in Neuromarketing, Electric Vehicles, Consumer psychology

INTRODUCTION:

In today's rapid growing market conditions, buying decisions are no longer driven by just specifications or price tags but also powered by emotions. The emotional connection is especially vital in emerging sectors like electric vehicles (EVs), where uncertainty and unfamiliarity can still cloud consumer confidence. Tata Motors, a pioneer in India's EV space, has not only embraced cutting-edge technology in its vehicles but also in its marketing approach. By combining Artificial Intelligence (AI) with neuromarketing strategies, Tata has found new ways to engage consumers not only logically but also emotionally. Through digital personalization, immersive storytelling, and relatable campaigns, the company is reshaping how people feel about electric mobility.

This study explores how Tata Motors is using AI-powered tools to tap into human emotions and drive EV adoption in India. By focusing on the psychological and emotional elements behind consumer behaviour like trust, excitement, and perceived value, this research aims to understand how these strategies influence brand loyalty and purchase decisions. It also looks at how these neuromarketing techniques help overcome common EV barriers such as

range anxiety, lack of awareness, and resistance to change. Ultimately, this research sheds light on how AI and emotional intelligence, when combined thoughtfully, can turn futuristic products into everyday essentials and how Tata Motors is leading that shift.

OBJECTIVES OF THE STUDY

1. To examine how Tata Motors uses Artificial Intelligence in its marketing of electric vehicles.

2. To understand the emotional and psychological strategies used to attract and influence customers.

3. To measure how AI-driven marketing tools affect customer trust, brand recall, and buying decisions.

4. To identify how these strategies help reduce customer hesitation and promote EV adoption.

REVIEW OF LITERATURE:

According to **Morin (2011)**, neuromarketing helps uncover subconscious drivers of consumer behaviour such as emotion, attention, and memory, which are often missed by traditional surveys. Tools like facial recognition, EEG, and biometric feedback are commonly used to analyse emotional engagement in campaigns.

Artificial Intelligence (AI) enables marketers to collect and analyse large volumes of consumer data to deliver personalized content. As noted by **Chatterjee et al. (2020)**, AI tools like chatbots, predictive analytics, and recommendation engines are enhancing consumer targeting, automating engagement, and improving satisfaction. In neuromarketing, AI helps identify emotional triggers and tailor messages accordingly.

Davenport et al. (2019) show that AI can recognize patterns in consumer behaviour, including emotional cues from digital interactions. This allows brands to craft emotionally resonant campaigns that increase trust and brand loyalty. Personalized advertisements, emotional storytelling, and real-time responsiveness are key outcomes of AI-powered emotional marketing.

According to **Pradeep (2015)**, such strategies have improved consumer engagement and purchase intent in automobile campaigns. The automotive sector has increasingly adopted neuromarketing to test design elements, ad effectiveness, and user experience. For instance, Hyundai and Ford have used neuromarketing to evaluate dashboard designs and consumer responses to advertisements.

Sheth and Mittal (2021) highlights that emotional appeal and trust in brand communication are major factors influencing EV adoption in India. When AI is used to deliver tailored, relatable content, consumer response tends to be stronger, resulting in higher purchase consideration and brand loyalty.

Tata Motors has emerged as a leader in the Indian EV segment through both product innovation and strategic marketing. According to recent media articles (e.g., Exchange4Media, 2024), Tata's EV campaigns blend AI tools (chatbots, WhatsApp communication, digital personalization) with emotionally driven messaging that connects with consumers on sustainability, trust, and affordability. These campaigns aim to break psychological barriers like range anxiety and low EV awareness.

AI IN NEUROMARKETING STRATEGIES ADOPTED BY TATA MOTORS IN PROMOTING ELECTRIC VEHICLES

Tata Motors has adopted innovative Artificial Intelligence (AI) strategies to emotionally connect with consumers and promote its electric vehicles (EVs) effectively. Instead of using traditional marketing alone, the company integrates AI tools with human insights to understand customer behaviour and deliver personalized, emotion-driven messages.

One of the major strategies is personalized digital marketing using AI-based platforms like *Sherlock AI*, which helps target potential EV customers more precisely by studying online behaviour and preferences. This makes the advertising more relevant and engaging for each user. Tata also uses chatbots, recommendation engines, and WhatsApp campaigns to communicate with consumers at various stages of their journey from initial interest to final purchase which creates a seamless and emotionally responsive experience.

In addition, Tata's connected car technology allows the collection of real-time user data, which is used to improve customer experience even after the purchase. Features like predictive maintenance, safety alerts, and infotainment personalization make customers feel more connected and supported.

Moreover, Tata blends empathy with AI by creating marketing content that reflects consumer values, such as sustainability and trust. This approach makes it easier for people to try electric vehicles by reducing common worries like how far the car can go, not knowing enough about EVs, or simply being unsure about switching from traditional vehicles. By using AI not just to sell, but to emotionally engage, Tata Motors successfully builds long-term relationships with its customers while positioning its EVs as reliable, future-ready choices.

RESEARCH QUESTION:

1. How does Tata Motors use Artificial Intelligence in its neuromarketing strategies to emotionally influence consumer perception and promote the adoption of electric vehicles in India?

HYPOTHESIS:

H0 – Tata Motors use of Artificial Intelligence in its neuromarketing strategies has no significant impact on consumer emotional perception and the adoption of electric vehicles in India.

H1 - Tata Motors use of Artificial Intelligence in its neuromarketing strategies has significant impact on consumer emotional perception and the adoption of electric vehicles in India.

RESEARCH METHODOLOGY:

Sample Size: 200 Customers who were using Tata EV

Data Collection: Structured Questionnaire (Google forms + Interviews) from Tata EV from Chennai city.

Statistical Tool: Pearson's Correlation coefficient & Chi-Square Test

Analysis Software: SPSS, Microsoft Excel

Variables:

Independent: Adoption of Electric Vehicle

Dependent variables: Consumer Emotional Perception

ANALYSIS AND INTREPRETATION

Table No. 1: Pearson Correlation Coefficient

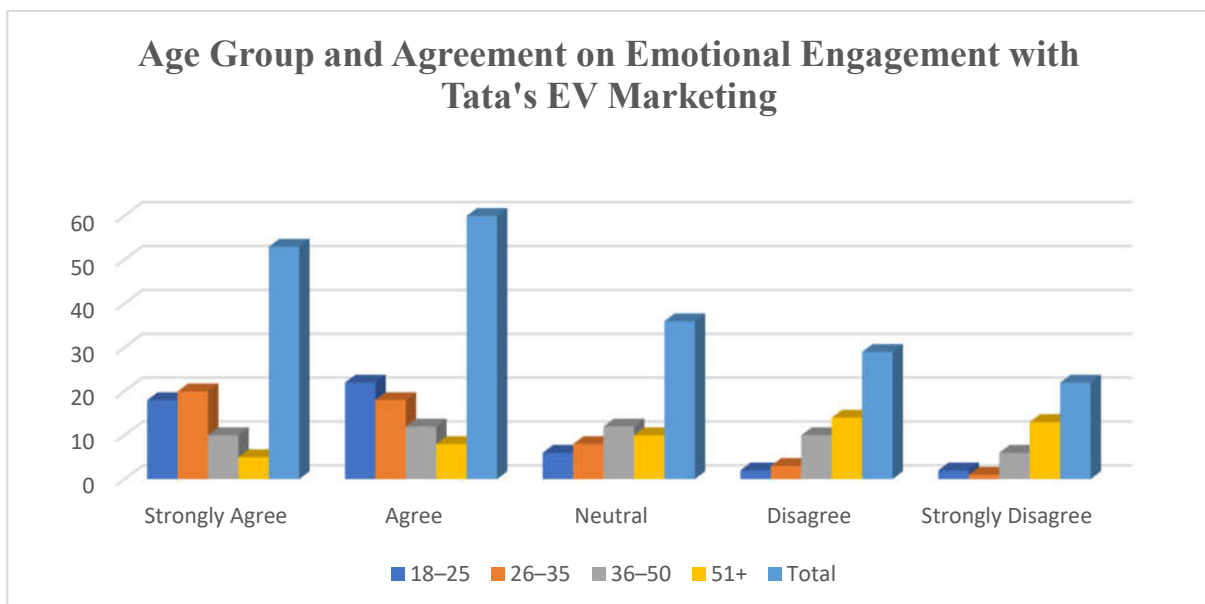| Variable 1	Variable 2	Correlation Coefficient (r)	P-Value
Consumer Emotional Perception	Adoption of EVs	0.684	< 0.0001

Interpretation:

The correlation coefficient (r = 0.684) indicates a strong positive relationship between consumer emotional perception and adoption of electric vehicles (EVs). This means that consumers who feel emotionally connected to Tata Motors' EV marketing are more likely to adopt or consider purchasing an electric vehicle. Since the p-value is < 0.0001, the result is statistically significant, confirming a meaningful relationship between the two variables. Thus, the alternative hypothesis is accepted, and the study conclude that emotional perception significantly influences EV adoption.

Table 2: Association Between Age Group and Agreement on Emotional Engagement with Tata's EV Marketing

Age Group	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
18–25	18	22	6	2	2	50
26–35	20	18	8	3	1	50
36–50	10	12	12	10	6	50
51+	5	8	10	14	13	50
Total	53	60	36	29	22	200

- **Chi-square (χ^2) value** = **34.25**

- **Degrees of Freedom (df)** = $(4–1) \times (5–1)$ = **12**

- **p-value** = **0.0009**

- **Significance**: **Statistically Significant at 0.01 level**

Table 3: Association Between Age Group and Agreement on Emotional Engagement with Tata's EV Marketing:

Interpretation:

The chi-square analysis shows a significant relationship between age group and emotional response to Tata's AI-powered EV marketing strategies. Younger respondents (18–35) show stronger agreement, while older groups show more neutrality or disagreement. There are generational differences in emotional connection to digital and AI-based promotions.

FINDINGS:

The following were findings of the study which supports the understanding of perception of Consumers in Electric vehicle with Neuromarketing strategies using artificial intelligence.

- ➢ The study shows that when people feel emotionally connected to Tata Motors' electric vehicle ads, they're more likely to consider buying one. In fact, the numbers show a strong link between emotional engagement and EV adoption which is proving that smart, emotion-driven marketing really works.
- ➢ Younger people, especially those under 35, seem more emotionally drawn to Tata's campaigns and are also more open to adopting electric vehicles. As age increases, emotional connection and interest in EVs slightly decline.
- ➢ When we looked at age groups and how emotionally they responded to Tata's marketing, we found a clear pattern that is different age groups react differently. This means Tata's AI-powered campaigns work best when they're tailored for the audience.
- ➢ Consumers mentioned that they appreciate how Tata uses tools like chatbots, personalized ads, and smart online experiences. These AI features make the communication feel more personal and relevant.
- ➢ The more personalized and interactive the marketing felt, the more people said they trusted the Tata brand. It also helped reduce common concerns like "Will the battery last?" or "Is this reliable?" — making people more comfortable with the idea of going electric.

LIMITATIONS:

The following were marks as a remarkable limitation for the study. The study was limited to a sample of 200 Tata Motors customers, primarily from specific geographic areas. As a result, the findings may not fully reflect the perceptions and behaviours of consumers across different regions of India.

CONCLUSION:

This study clearly shows that Tata Motors is not only selling electric cars but also builds emotional connections using Artificial Intelligence. The way they use AI to create personalized, relatable marketing is helping people trust and connect with the brand, especially younger customers.

When consumers feel seen and understood, they're more willing to try something new variants like switching to an electric vehicle. Tata's strategy of blending technology with emotion is making that switch easier and more appealing.

As the world moves toward cleaner mobility, AI-driven, emotionally aware marketing will play a key role in helping people make that leap. Tata's success offers a great example of how brands can balance innovation with human connection and win the trust of the next generation of consumers.

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