

# CUSTOMER AWARENESS AND SATISFACTION REGARDING AIRTEL'S AI-BASED CUSTOMER PROTECTION MECHANISM

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**Abstract:** In this world of digital era, mobile phones have become an essential part of communication. SMS for communication is primarily used by banks, governments, and other organizations. SMS have also led to many scams. It has both merits and demerits. SMS have led to an increasing number of spam and fake SMS there is a severe threat to the safety and security of users. To reduce these spam messages, Airtel has launched an AI based SMS filtering system that automatically identifies and filters spam messages. This study examines the awareness level of Airtel users about the AI filtering system. It also helps in understanding the effectiveness of the system and satisfaction of the customers. This study considers Airtel users only to understand clearly. This study will analyse effective the AI system is in identifying the real and fake messages. It also helps in understanding the customer perception and trust on the system.

**Keywords:** SMS, AI filtering system, awareness level.

## I. INTRODUCTION OF STUDY AND RESEARCH DESIGN

In this digital era, mobiles phones have become a necessary part in people's life, mobile phones are not only used for communication it's also used for bill payment, online shopping, and more. SMS (Short Message Service) plays a primary role in communication. Mainly its used by Banks, Government and Private Companies to send information's to their customers. Although it has many advantages it also became a great threat to the users. Many fraudulent and spam messages have become a great threat to the customers like asking them their confidential data like one-time password (OTPs) and encouraging them to click the fraudulent links. To protect the users from this threat the Indias leading technology Airtel have invented an AI technology to filter spam and fraudulent messages. The AI systems find the spam messages and block the message directly without sending it to the users it identifies real messages and fake ones and separate it. The system uses advanced techniques to identify spam messages and ensures customers safety. This study aims to examine the customer safety and awareness towards the AI filter system. It also focuses on understanding the customers satisfaction toward the Airtel's AI spam filtering.

### OBJECTIVES OF THE STUDY

- To examine the level of awareness among Airtel SMS users regarding the AI - based SMS filtering mechanisms.
- To assess the impact of the AI filtering system on customer safety and satisfaction.

## II. SCOPE OF THE STUDY

The scope of this study is to understand how the Airtel's AI based system works to protect their users. It mainly focuses on these three aspects: customer awareness, effectiveness in blocking the spam messages, satisfaction, and the safety of the users. Since SMS is widely used by Banks, Government offices, and Private organizations to pass information's to the public. This study is limited to Airtel users only to make a more specific understanding. The research doesn't compare with other tele communication companies. It also helps to study how users experience and perception of the system. It also helps to find the whether the customer feel secure and satisfied using the system. This also helps the company strengthen the system according to the feedback to strengthen customer relationship.



### III. STATEMENT OF THE PROBLEM

SMS is widely used by banks, Government offices, and private organization for sending messages to their customers. There are many spam and fake SMS, which creates a threat to the customers. Due to this the customers suffer a lot of financial loses. In India, such cases are increasing and causing more losses. To reduce this the Airtel's AI based SMS filtering system detects and blocks the spam messages even though the system protects the customers the problems still exist. Many customers are aware of this system but still receives spam messages So its actual impact on safety is not examined properly. This study helps to examine the awareness, effectiveness of the system among the customers. This study also helps in examining these gaps and understand whether the system protects and satisfies their customers.

### IV. RESEARCH METHODOLOGY

#### Data Collection

**Primary Data:** The data is collected through a questionnaire method in Coimbatore City.

**Secondary Data:** For secondary data, the related journals, articles, websites and past thesis were referred for this project.

#### SAMPLE SIZE AND SAMPLING TECHNIQUES:

A Simple Random Sampling technique is used to select a representative sample from employees in Coimbatore. 110 samples were collected from the respondents.

#### TOOLS USED FOR ANALYSIS:

- ANOVA
- Rank

#### LIMITATIONS OF THE STUDY:

- All responses were obtained by Airtel users only.
- Study area is restricted within the Coimbatore city.

### V. REVIEW OF LITERATURE

**Viswanathan Ramasamy Reddy, Sukham Romen Singh, Elangovan Guruva Reddy, Dr. E. Punarselvam, and Dr. T. Vengatesh (2024)** in their study titled "AI-Driven Enhancement of Spam Detection in SMS and Email Using AWS Leveraging Deep Spam Model" focused on improving spam detection using AI and cloud technologies. The objective of the study was to develop a deep learning-based spam filtering model deployed on AWS for SMS and email communication. The findings showed higher detection accuracy, improved scalability, reduced false positives, and efficient real-time filtering. The study suggested the adoption of cloud-based AI models for large-scale spam control. The conclusion stated that integrating deep learning with AWS provides an effective and reliable solution for modern spam detection systems.

**Bhaludra R. and Nadh Singh (2023)** in their study titled "Identification of Spam Message by Using AI & ML" aimed to identify and classify spam messages using artificial intelligence and machine learning techniques. The objective of the study was to improve the accuracy of spam detection and reduce manual intervention. The findings revealed that ML-based models effectively distinguish spam from legitimate messages with higher accuracy. The study suggested adopting advanced AI models to further enhance detection performance. The conclusion highlighted that AI and ML-based spam detection systems provide a reliable and efficient solution for managing spam messages.

### VI. DATA ANALYSIS AND INTERPRETATION

**Objective 1: To assess the impact of the AI filtering system on customer safety and satisfaction.**

**H<sub>0</sub>** - There is no significant relationship between age and satisfaction of the users.

**H<sub>1</sub>** - There is a significant relationship between age and satisfaction of the users.

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Protected from spam and fake messages while using Airtel	Between Groups	3.581	3	1.194	2.099	.105
	Within Groups	60.274	106	.569		
	Total	63.855	109			
Satisfied with the way Airtel blocks unwanted messages	Between Groups	2.242	3	.747	1.305	.277
	Within Groups	60.676	106	.572		
	Total	62.918	109			
Comfortable sharing my number because of Airtel's protection	Between Groups	9.603	3	3.201	4.628	.004
	Within Groups	73.315	106	.692		
	Total	82.918	109			
Airtel's spam filtering system works better than other networks	Between Groups	14.216	3	4.739	5.878	.001
	Within Groups	85.457	106	.806		
	Total	99.673	109			
Personal information is safer with Airtel	Between Groups	16.490	3	5.497	4.754	.004
	Within Groups	122.564	106	1.156		
	Total	139.055	109			
Not received fraud messages recently because of using Airtel filtering	Between Groups	8.351	3	2.784	3.032	.033
	Within Groups	97.322	106	.918		
	Total	105.673	109			
Noticed decrease in spam and scam messages	Between Groups	5.373	3	1.791	2.218	.090
	Within Groups	85.617	106	.808		
	Total	90.991	109			
Quality of service is better so that the SMS disturbance is avoided	Between Groups	14.250	3	4.750	6.091	.001
	Within Groups	82.668	106	.780		
	Total	96.918	109			

Source: Primary Data

**Interpretation**

There is no significant difference between the groups regarding perceptions of protection from spam and fake messages, blocking unwanted messages, and seeing fewer spam messages, as their p-values are above 0.05. In summary, individuals from different groups share similar perceptions. However, regarding ease of sharing mobile numbers, the relative performance of Airtel’s spam protection compared to other operators, feeling safe with personal data, seeing fewer fraud messages, and service quality in preventing SMS interruptions, there are significant differences between the groups. This implies that these factors are significantly different across the groups. Taken together, Airtel’s superior spam protection features seem to have a significant influence on users’ confidence and perceptions of service quality on these specific factors.

**RANK ANALYSIS:**

**Objective 2:** To examine the level of awareness among Airtel SMS users regarding the AI - based SMS filtering mechanisms.

<b>Spam/Scam Factors</b>	<b>Rank 1 (4)</b>	<b>Rank 2 (3)</b>	<b>Rank 3 (2)</b>	<b>Rank 4 (1)</b>	<b>Total Score</b>	<b>Mean</b>	<b>Rank</b>
<b>Fake lottery or prize messages</b>	45	20	35	10	<b>320</b>	<b>0.273</b>	<b>I</b>
<b>Unwanted product promotions</b>	30	36	24	20	<b>296</b>	<b>0.253</b>	<b>II</b>
<b>Messages with suspicious links</b>	20	40	30	20	<b>280</b>	<b>0.239</b>	<b>III</b>
<b>Investment or trading offers</b>	25	35	20	30	<b>275</b>	<b>0.234</b>	<b>IV</b>

Source: Primary Data

## VII. RESULTS

The result of the ranking analysis reveals that the spam messages related to fake lottery or prize are ranked first as they are considered to be the most common and disturbing ones. The second rank is occupied by the unwanted product promotion messages, which are ranked second as they are also commonly encountered by users. The messages containing suspicious links are ranked third, which shows that users are moderately concerned about them. Investment/trading-related messages are ranked last, which shows that they have a relatively lower impact.

## VIII. FINDINGS

### FINDING FROM ANOVA

The results obtained from the ANOVA test show that there are no significant differences among the groups in terms of basic spam control services like protection from spam and fake messages, blocking unwanted messages, and reduction of general spam messages. This reveals that the users in all groups have a similar experience with Airtel's basic spam protection services. Significant differences are noticed in the aspects of user trust and confidence. These include ease in sharing mobile numbers, trust in Airtel's spam protection services compared to other operators, security of personal details, and reduction of fraud messages. The quality of service in protecting against SMS disturbances is also significantly different among the groups. Advanced spam protection services have a significant influence on users' confidence and service quality.

### FINDINGS FROM RANK ANALYSIS

Analysis of the ranking shows that the spam messages that are most prevalent and of great concern to users are the lottery or prize messages that are considered to be fake. This shows that the respondents are highly concerned about these messages. The second category that is of great concern to users is the unwanted products messages. This shows that these messages are also very common. The third category that is of moderate concern to users is the messages with links that are dubious. The last category is the investment/trading messages. This shows that these messages cause less disturbance to users.

## IX. SUGGESTIONS

Based on the findings, the study suggest that Airtel should focus more on spam protection and making the system more effective also protecting the data of the users. While basic spam blocking works fine, improving the AI features it helps in making the users feel secure by protecting their personal details and also making them feel confident on using the system. Since fake lottery or prizes messages are frequent Airtel should give more priority to blocking these messages and also reducing the unwanted product promotion messages which comes next. Messages with suspicious links (I.e.) investment promotions and trading messages should be identified as scam.

## X. CONCLUSION

The study concludes that the spam protection mechanism is the important element in enhancing user's satisfactions and trust in Airtel services. Users are looking for an effective filtering tools that reduces the spam messages, especially messages like lottery and prizes. Enhancing the spam filtering system, it creates an awareness among the users. It protects the user's data by reducing scam. These helps to create a trust among the users and the company.



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## WEBSITE:

<https://www.airtel.in/>

<https://scholar.google.com/>