

Airtel's AI SMS Filtering System- An User Perception Towards Spam Protection

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Abstract

The study focuses on Airtel's Artificial Intelligence-based SMS filtering and its effectiveness in blocking spam and fraudulent messages. The main objective of the study is to examine the demographic profile of respondents and to understand how Airtel's AI system works in identifying and preventing spam and fake messages and analyse customer perception towards the AI filtering system. The findings reveal that the majority of respondents are highly satisfied with the reliability and effectiveness of Airtel's AI filtering system. The results also show that there is no significant relationship between monthly income and the type of SMS received, indicating that spam affects all users equally. Similarly, the perception towards the AI filtering system does not significantly differ among different age groups, showing wide acceptance of the system. The study concludes that Airtel's AI-based filtering system plays an important role in improving customer safety, trust, and satisfaction. It is suggested that Airtel should continue improving its AI system and create more awareness among users to enhance protection and overall service quality.

Keywords: blocking spam, AI filtering system, satisfaction.

INTRODUCTION OF THE STUDY AND RESEARCH DESIGN:

People are using their phones all the time. Because of this we are getting a lot of spam messages and fake messages on our phones. Mobile phone users do not like these messages. They can be a problem for the security of our phones. You probably get messages that say you have won a prize. Some of these messages have links that can hurt your phone. There are also messages that try to sell you things. They are not being honest, about what they are doing.

Mobile phones are getting these messages and it is annoying mobile phone users. To address this issue, phone companies are using computers to help stop these messages. Airtel is one of these companies. Airtel has developed a system that uses computers to identify and block spam and fake messages. This system analyses patterns and learns from them to distinguish between real and fake messages. It operates in real time without user involvement and continuously learns to improve its effectiveness. The present study aims to understand how Airtel's AI-based SMS filtering system works and its role in preventing spam and fraudulent messages.

OBJECTIVES OF THE STUDY:

- To study about the demographic profile of the respondents.
- To understand how Airtel's AI system works to block spam and fake messages.

SCOPE OF THE STUDY:

Airtel has a system that uses intelligence to get rid of messages that people do not want. This system is really smart. It can find bad messages on its own and stop them from reaching people right away. Airtel's system is always getting better at stopping unwanted messages. The people who did this study looked at the kinds of messages that're bad for people like messages that try to trick them with fake offers or scams and ads that they do not want to see. They also wanted to know what people think about Airtel's services that stop messages. They asked people if they know about these services. If they like them. They also asked people if they trust Airtel to keep them safe, from spam messages. Airtel's system is important because it helps to stop

messages and keep people safe. Airtel's AI-based SMS filtering system is essential, so we will analyse how it helps reduce spam and fake messages. Additionally, the study looks at the effects of AI-based filtering on reducing message overload and improving user experience. The scope is limited to Airtel mobile users and SMS communication only and does not include other telecom operators, messaging apps, or email platforms.

STATEMENT OF THE PROBLEM:

The rapid rise in mobile phone usage has caused a significant increase in spam, fraudulent, and fake SMS messages. This situation exposes users to financial risks, privacy threats, and ongoing inconvenience. Messages about fake prizes, phishing links, and misleading promotional offers undermine user trust in mobile communication services. Although telecom operators like Airtel have put in place AI-based SMS filtering systems to address this issue, there is little clarity on how well these systems identify and block spam messages without interfering with real communication. This study aims to explore how Airtel's AI-based SMS filtering system works and how effective it is in blocking spam and fake messages. It will also look into user perceptions of its impact on safety, trust, and the overall communication experience.

RESEARCH METHODOLOGY:

Data Collection

Primary Data: The data were gathered using a questionnaire method in Coimbatore City.

Secondary Data: Secondary information was sourced from journals, articles, websites, and previous research studies.

SAMPLE SIZE AND SAMPLING TECHNIQUES:

A simple random sampling method was adopted, and data were collected from 110 respondents.

TOOLS USED FOR ANALYSIS:

- Frequency analysis
- Chi-Square analysis
- ANOVA

LIMITATIONS OF THE STUDY:

- The research is confined to Airtel SIM users only.
- The study is limited to the Coimbatore City area.

REVIEW OF LITERATURE:

Kanchan D. Shah (2025) studied the use of “Artificial Intelligence in detecting and preventing fraud in mobile communications such as SMS, phone calls, and WhatsApp video calls”. The study explained that AI technologies like LSTM and Recurrent Neural Networks help identify spam and fraudulent activities by analysing patterns and unusual behaviour. The results showed that AI-based systems are highly effective and can detect fraud with accuracy between 94% and 99%. The research also found that multi-layered protection systems and realtime monitoring improve user safety. The study concluded that AI plays an important role in protecting mobile users from spam and fraud, and continuous improvement in AI systems is necessary to provide better security and customer

Vahitha Banu. (2025) conducted a study on “Real-time fraud detection in telecom charging systems using Artificial Intelligence”. The study explained how AI helps telecom companies detect fraudulent activities instantly by analysing user behaviour, call patterns, and message activities. The research highlighted that AI-based systems can quickly identify unusual activities and prevent financial losses and spam-related fraud. The study also emphasized that real-time monitoring and automated detection improve customer security and trust in telecom services. The findings concluded that AI plays a vital role in strengthening telecom security systems and helps protect customers from spam, fraud, and unauthorized activities.

DATA ANALYSIS AND INTREPRADATION:

Table no.1 Satisfaction level towards AI filtering System

AI filtering system	Level of satisfaction %				
	Highly satisfied	Satisfied	Neutral	Dissatisfied	Highly Dissatisfied
Spam Detection Accuracy	40	35	15	12	8
Personal Data security	25	35	17	30	3
AI Adaptability	49	15	20	11	12
Reliability of Filtering system	60	12	24	10	4
Ease of use	52	35	10	8	5
Real-time Filtering Speed	34	56	6	8	6

Source: Primary data

Chi-square Test:

Table no.2 describes the relationship between monthly income and type of SMS received.

H₀: There is no significant relationship between monthly income and type of SMS received.

H₁: There is no significant relationship between monthly income and type of SMS received.

Calculated Chi-Square value	Degree of Freedom	Table Value	Conclusion
8.726	9	15.212	Accepted

Interpretation: The above table shows that, since the calculated chi-square value (8.726) less than the table value (15.212). Null hypothesis accepted at 5% level of significance. There is no significant relationship between monthly income and type of SMS received.

ANOVA (Analysis of Variance)

Table.No.3 Age wise Perception towards AI Filtering System

Factors		Sum of Squares	DF	Mean Square	F	Significance
Perception towards AI Filtering System	Between groups	101.536	2	60.250	3.0550	0.075
	Within groups	11025.00	451	23.026		

Interpretation: From the above table that the F value was not significant. Hence the hypothesis was accepted. Therefore, it was concluded that perception towards AI filtering system does not significantly between the age wise of the respondents.

FINDINDS OF THE STUDY:

- Majority of the respondents highly satisfied with the **Reliability of Filtering system towards AI filtering system.**
- There is **no significant relationship** between monthly income and type of SMS received.
- It was concluded that perception towards AI filtering system **does not significantly** between the age wise of the respondents.

SUGGESTIONS OF THE STUDY:

- Airtel is suggested to continue to ensure that its AI system which screens messages is very dependable to effectively block junk mail.

- Airtel ought to have publicity drives for every customer; because people are bothered by spam no matter how much money they have.
- Airtel is recommended to give all customers the same spam-blocking tools, so that the service is fair and of good quality.
- Airtel can make the AI system simple and easy to understand so that users of all age groups can trust and use it confidently.
- Airtel suggested to change and make the AI system better all the time, depending on what people who use it say, to make it work better and to make people happier with it.

CONCLUSION:

Most users are happy with Airtel's AI system because it blocks spam and fraudulent messages effectively. The system offers equal protection to everyone, no matter their income level, which ensures fairness. People from various age groups also trust and accept Airtel's AI filtering system. This protection makes users feel safer while using their mobile services. Additionally, improving the system and raising awareness among users can boost their satisfaction and strengthen their trust in Airtel's AI-based filtering system.

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