

UTILISING AI FOR WOMEN'S SAFETY AND EMPOWERMENT IN URBAN AREAS OF COIMBATORE

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ABSTRACT

Women's safety is still a concerning factor due to the threats in the society. Women plays a major role in the society and yet they are not safe, Crimes against women are on the rise at an increasing rate; some of the most extreme cases include human trafficking, which mainly involves women and children in many illegal activities against their will and consent. Until the evolution of modern technology, it was a hard task to safeguard women from these activities.

I.INTRODUCTION

Artificial Intelligence is the science of replacing the human works into machine tasks, some refers these AI as a threat to the society. However, these AI technologies can do things which human can't, and it is considered to be the advantageous factor. AI's Women safety applications can definitely help to prevent crimes against women. Proactive is better than being reactive with the use of AI- driven applications on Women's safety and empowerment. The main users of these AI applications will be women so these applications always concern about the reliability and comfort of the user while using this application.

II.STATEMENT OF THE PROBLEM

Artificial Intelligence is an epic in which it replicates and optimize human intellect, such as reasoning and data storing, but now a days it is been used for many other purpose and services. This study aims to identify and analyse on how AI can be implemented for the purpose of proactive measures to safeguard and protect women against molestation and crimes. These ai technology consist of both positive and negative aspects, in which in women safety and empowerment it acts as a positive impact with its advancement. By addressing these opportunities, and challenges this research aims to insight the technology applications that can be used for the potential development and majorly usable for safety

purposes. Ultimately, a development and integration in AI technology and application leads to an immense growth and empowerment to the society.

III.SCOPE OF STUDY

The present study inhibits the various features of the AI, it's knowledge and pattern level in the safety and security towards women in critical situation. It gives a future scope for researchers to carry out further research studies in similar areas while affiliating several extensions with further analysis of different variables involved. The effectiveness in functionalities is being studied to know more about the effectiveness of AI in empowerment and safety.

IV.OBJECTIVES

- To understand the role of AI in Women's safety, security and empowerment
- To identify the effectiveness of AI in security management
- To analyse the perspective of Women in AI technology
- To study the lacking area of AI in Women's safety

V.LIMITATIONS

- This analysis is limited to only certain and selected region of Coimbatore city. Thus, the findings may not be widely accepted.
- Secondary data was not sufficient for the study which is been undergone.
- Lack of awareness of AI among women leads a major issue while preparing the questionnaire and many were not willing to participate on survey.

VI.REVIEW OF LITERATURE

1.A.H. Ansari suggested new protection technologies for women using GSM & GPS to ensure that women never felt vulnerable in the face of societal issues or difficulties. Women's security is assured with a raspberry pi, GSM, GPS and motion detector. Whenever women fear a threat, the only button on the unit must be pushed.

2.GSM.B. Vijayalakshmi has suggested using GPS and GSM model in order to increase female protection. A tiny unit is built and can be mounted on the strip or monitor with a buzzer and microcontroller. If there is a case in which the woman should use this gadget by clicking this buzzer to send SMS warnings (5 members).

VII.RESEARCH METHODOLOGY

Research methodology is a systematic way to solve research problems. It is a science of studying how research is to be carried out. It aims to give a work plan of research. The choice of research methodology depends on the research objectives and the nature of the research questions is being addressed.

VIII.DATA ANALYSIS AND INTERPRETATION

The data collected for the study was analysed with suitable statistical tools.

The statistical tools that are used in the study are as follows;

- Simple Percentage analysis
- Chi square
- Anova

SIMPLE PERCENTAGE ANALYSIS

TABLE 4.3.4

EXPECTATIONS ON THE SIGNIFICANT FEATURES OF THE AI MOBILE APPLICATIONS

S. No	Significant features	No. of. respondents	Percentage
1	Real time GPS tracking	22	14.7%
2	Accessibility	51	34%
3	In app chat/ Call support	43	28.7%
4	Self - defense guidance	23	15.3%
5	Personalized learning experience	11	7.3%
Total		150	100%

The above table 4.3.4 shows the respondents expectations on the significant features of the AI application, **(34%)** of the respondents expects accessibility, **(28.7%)** of the respondents expects In app chat/ Call support, **(15.3%)** of the respondents expects Self-defense guidance, **(14.7%)** of the respondents expects Real time GPS tracking, **(7.3%)** of the respondents expects personalized learning experience. **Majority (34%) of the respondents expects accessibility.**

CHI SQUARE

TABLE 4.4.2

REALTIONSHIP BETWEEN AGE GROUP AND AI SAFETY TECHNOLOGY

Ho: There is a significant relationship between age group and AI safety technology

Contingency Tables

AGE	AI Safety Technology					Total
	Emergency call notification	GPS tracking	Mobile application	SOS alert	Wearable safety devices	
Above 21 - 30 years	4	4	44	4	2	58
Above 31 - 40 years	12	7	0	9	11	39
Above 40 years	7	6	0	2	11	26
Below 20 years	7	4	0	8	8	27
Total	30	21	44	23	32	150

Chi-Squared Tests

	Value	df	P
X ²	106.798	12	< .001
N	150		

INTERPRETATION:

It is clear from the above table which shows that, the calculated value of chi-square at 0.05% level is higher than the table value. Hence the hypothesis is accepted. So, there is relationship between the age group and AI safety technology.

ANOVA

TABLE 4.4.6
RELATIONSHIP BETWEEN EDUCATIONAL QUALIFICATION AND AI BARRIERS FACED
BY WOMEN

H0 is accepted, hence there is no significant relationship between Educational qualification and AI barriers

ANOVA table

Source of Variation	Sum of Squares SS	df	Mean Squares MS	F	<i>p</i> -value
Between rows	133	3	44.3333	0.3516	0.7888
Between columns	199	4	49.75	0.3946	0.8087
Error (residual)	1513	12	126.0833		
Total	1845	19			

INTERPRETATION

1. F for between rows

F (3,12) at 0.05 level of significance

=3.4903

As calculated FR=0.3516<3.4903

So, H0 is accepted, hence there is no significant differentiating between Educational qualification and AI barriers.

2. F for between columns

F (4,12) at 0.05 level of significance

=3.2592

As calculated FC=0.3946<3.2592

and AI barriers.

IX.FINDINGS, SUGGESTION AND CONCLUSION

FINDINGS

1. Majority (**34%**) of the respondents expects accessibility.
2. The calculated value of chi-square at **0.05%** level is greater than the table value. Hence the hypothesis is accepted. So, there is relationship between the age group and AI safety technology.
3. As calculated $FR=0.3516 < 3.4903$, So hypothesis is accepted, hence there is no significant differentiation between rows. As calculated $FC=0.3946 < 3.2592$, So hypothesis is accepted, hence there is no significant differentiation between columns.

SUGGESTIONS

- It is found that AI applications may lack in user-friendly interfaces. So, it will be better when the AI applications improved in its user-friendly interfaces. It may be regarded as one of the barriers while handling the applications.
- This application makes women feel safe and secured even in isolated and crime prone areas. This can be also useful to children since a lot of children is abused in public places.
- Improvement of the accessibility feature which plays a significant role at times of any uncertain events. Expectation rate on accessibility is higher than any other features. So, it is considered as an important factor on the improvement in accessibility feature.

CONCLUSION

In conclusion, the use of information technology (IT) has the potential to play a significant role in enhancing women's safety. Mobile apps, GPS tracking, social media, and online resources can provide women with quick and easy access to emergency services, a sense of security, and support. However, there are also concerns about the reliability and accuracy of these technologies, as well as their potential to be used to monitor and control women's movements. Studies have shown that women are more likely to be subjected to online harassment, and that social media platforms can be used as a tool for harassment.

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