

Women's Health and Protection Application

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ABSTRACT

Women's security has always been a major concern, and numerous potential solutions have been discussed regarding how technology can be used to address the issue. Currently, the rapid rise in smartphone usage has made it possible to integrate personal security efficiently and effectively with the help of hardware and software. Existing security methods necessitate some form of human input and the use of only pre-selected contacts. When it comes to tragic occurrences involving women, the number is frighteningly high. Problems can arise from a variety of situations, including women walking on the street after work, going to the supermarket, or a variety of other reasons when they are alone. When the need arises, a single click on this application will recognize the location using GPS and will send a message to the registered contacts and nearby police station containing the location URL. The primary goal of this study is to ensure and enhance personal safety. As a result, the primary goal of this project is to make it easier for users to get assistance promptly. In addition, application has a chatbot for health related problems. Women feel hesitant to talk about or speak about their health issues or problems openly. Thus, the goal of this chatbot is to help women to find information and remedial solutions about their health. Query is processed by the bot and response will be displayed on application. This chatbot will provide helpful information instantly.

Keyword : - Women , Contacts, Safety, Health, Chatbot.

1. INTRODUCTION

In today's world, it is not safe for a person to travel alone at night especially for women; it will be high time to travel alone because a woman is not highly strong as men to protect herself from them. The good way to reduce chances in becoming a victim of violent crime (robbery, sexual assault, rape, domestic violence) is to identify and call on resources to help you out of unsafe situations. Whether you are in instant trouble or got separated from friends during night and do not know to reach home, having these apps on your phone can diminish our risk and bring assistance when we require it. In this paper, we present an application for smart phones working over android platform. National Crime Records Bureau of India, reported incidents of crime against women increased 6.4% during 2012, and a crime against a woman is committed every three minutes. 65% of Indian men believe women should tolerate violence in order to keep the family together, and women sometimes deserve to be beaten. We introduces an app which ensures the safety of women. This helps to identify and sms on resources to help the one out of dangerous situations. This application sends your location to your registered contact numbers and also to nearby police station for help. This application also provide another feature that is health related chatbot. It will give information related to that problem. If there is any treatment available it will suggest you. Most of the women health issues, they doesn't know about or neglect it.

2. LITERATURE REVIEW

In [1] paper describe when the user believes she is in danger, this app may be activated by an unique click. This is used to send messages informing the recorded contacts of the consumer's location every few seconds. As a result, it operates as a guard, trailing the consumer until she becomes uncertain. This study proposes a novel method for gradually transmitting the notion to the recorded contacts until they press the "HELP" knob. Continuous location tracking information through SMS makes it possible to locate the victim's neighbourhood quickly and maybe with caution. This request aims to ensure the safety of women. This is resolved by talking about the resources that, in the modern world, threaten daughters' security. Through many features offered by our plan, our software ensures that wives are not submerged in the aforementioned positions.

In [2] paper describes app can be activated by a single click when the user feels she is in danger. This application communicates the user's location to the registered contacts for every few seconds in the form of message. Thus, it acts like a sentinel following behind the person till the user feels she is safe. This paper presents analysis a unique feature of this application to send the message to the registered contacts continuously till they are pressing 'HELP' button. Continuous location tracking information via SMS helps to find the location of the victim quickly and can be rescued safely. This application aims to ensure women safety. This is achieved by addressing the circumstances that compromise the safety of women in today's day and age. This app ensures women are not put into such situations through various features offered by our system.

In [3] paper describes algorithm the attempts for solving linear inseparable problems have led to different variations on the number of layers of neurons and activation functions used. The backpropagation algorithm is the most known and used supervised learning algorithm. Also called the generalized delta algorithm because it expands the training way of the adaline network, it is based on minimizing the difference between the desired output and the actual output, through the downward gradient method (the gradient tells us how a function varies in different directions). Training a multilayer perceptron is often quite slow, requiring thousands or tens of thousands of epochs for complex problems. The best known methods to accelerate learning are: the momentum method and applying a variable learning rate. The paper presents the possibility to control the induction driving using neural systems.

In [4] paper describes women feel hesitant to talk about or speak about their health issues or problems openly. Thus, the goal of this chatbot is to help women to find information and remedial solutions about their health. Query is processed by the bot and response will be displayed on web application. This chatbot will provide helpful information instantly. It will also provide prediction about the disease that the women might be suffering. So this bot will help to make Right decision and give right advice to women on 24/7 basis. It will act as a helping hand for working women to keep check on their health in their busy routine. At the same time this will also help women in rural areas who are apprehensive to talk about their health issues publicly.

3. PROPOSED SYSTEM

In this proposed system, the user can register herself in application using her name and contact number and also add the contacts to which the message has to be sent. So, when she is in some danger by just opening the app and pressing the SOS button, the message stored will be sent to those numbers she has added in this application. So that he can receive the help in correct time. When is presses a SOS button message with her location will send to a nearby police station. There are also an option that is nearby hospital. In case of any emergency user can use that option for help. This application can locate a user's location. If anyone using a Rescuer application, app will access user's location to provide a help. Using this application user can follows a safety tips in emergency.

Rescuer has an AI-driven chatbot. Chatbot will give an information about women's health related problem. Chatbot will give information about causes, treatment and symptoms. Chatbot will give an answers of users every questions. It will help user to know about health problem or disease. This chatbot will provide helpful information instantly. Every women didn't know about many women's health related problems this application will help to know about that problems. If any user has any health problem, user will get information about that health problem. The Multilayer Perceptron (MLP) is a supervised learning algorithm that can learn a function by training on a dataset. Chatbot have a trained datasets.

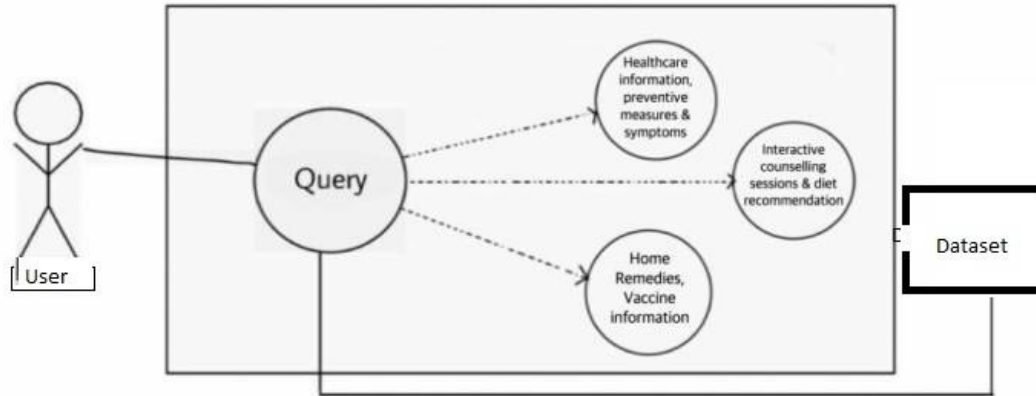


Fig -1: UML diagram of health chatbot

3.1 MULTILAYER PERCEPTRON

The Multilayer Perceptron (MLP) is a supervised learning algorithm that can learn a function by training on a dataset. It's a type of artificial neural network that can approximate any continuous function. MLPs are significant in machine learning because they can learn nonlinear relationships in data. They're used for tasks such as classification, regression, and pattern recognition. Working with non-linear problems, handling complex problems with large datasets, Higher accuracy rate, Reducing prediction error, and Quickly predicting output. A typical learning algorithm for MLP networks is also called back propagation's algorithm. A multilayer perceptron (MLP) is a feed forward artificial neural network that generates a set of outputs from a set of inputs. The MLP learning procedure is as follows: Starting with the input layer, propagate data forward to the output layer. This step is the forward propagation. Based on the output, calculate the error (the difference between the predicted and known outcome). The error needs to be minimized. Back propagate the error. Find its derivative with respect to each weight in the network, and update the model. Repeat the three steps given above over multiple epochs to learn ideal weights. Finally, the output is taken via a threshold function to obtain the predicted class labels.

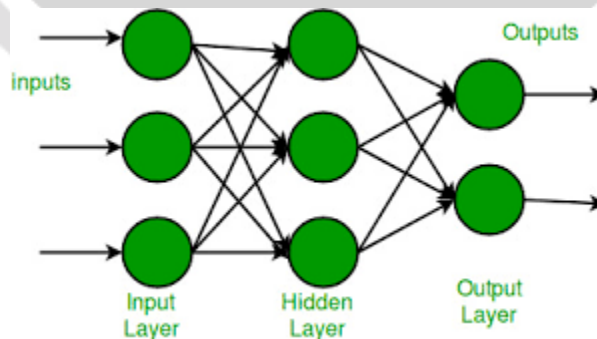


Fig -2: Multilayer Perceptron

3.2 ADVANTAGES

1. Your loved ones and close friends can automatically receive text message.
2. Exact time of the alert triggered. Your location (with map link) will sent saved contact numbers and nearby police station.
3. Chatbot for health related problems.
4. Self-defense video for guiding victim, how to remain safe and protect in dangerous situations arising.
5. User-friendly application.

4. SYSTEM DESIGN

This android application is useful when the user is in some problem or needs any help. When the user opens this application, can see a SOS button. This application sends the message to those contact numbers which she has saved. The total evaluation can be done in three major steps which are described individually. Evaluation describes the whole implementation of the application in three major steps. The first major step is to enter the contact details in the application created another major and first step is user has to register herself in application using her mobile number and name. Those contacts can be our relatives, friends and chief cop of the particular city the person we live in. When the application is installed in the smart phone for the first time the above contact details should be provided. The application will save the given information. The second major step is to send the GPS information (GPS information can be in the form of the Coordinates or the URL which leads to the location of the person any stock map application in the likes of third-party application like Google Maps) to the registered contacts and nearby police station at danger times or when the person is needed to be rescued. This step is followed only when the SOS button is pressed in application. The whole process of this step is done only when the device is connected to the proper mobile network and location service in the device is switched on (GPS). The third major step comprises of work done in sending the message containing location URL continuously to the registered contacts. The exact location of the person can be tracked by the application continuously which is the primary aim of the proposed system and the person can be rescued. User can search a nearby places using this application like nearby Police station and nearby hospitals. In case of emergency like choking, bleeding heavily, heart attack and etc application will provide a related videos for help. It also have a self-defense videos for guiding victim, how to remain safe and protect in dangerous situations arising.

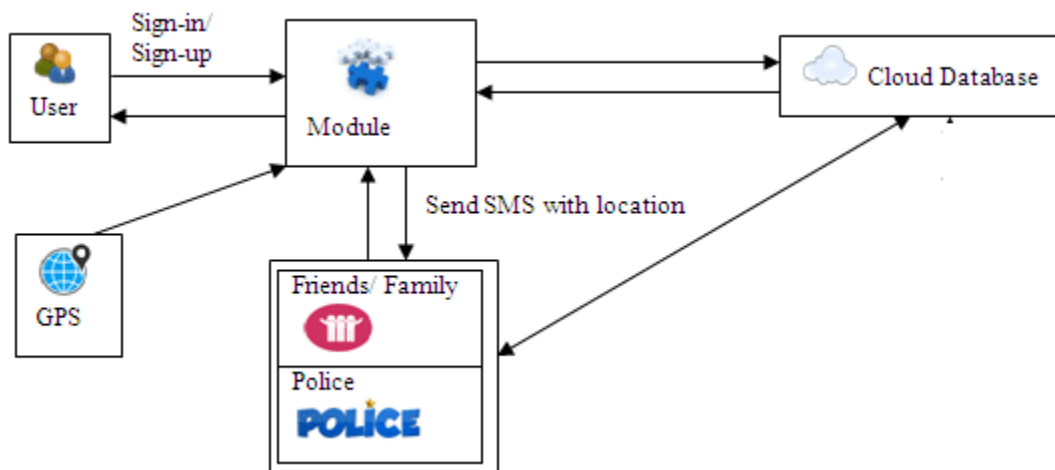


Figure -3: System Architecture 1

This application also provide an AI-driven chatbot for women's health related problems. Women feel hesitant to talk about or speak about their health issues or problems openly. Thus, the goal of this chatbot is to help women to find information and remedial solutions about their health. Query is processed by the bot and response will be displayed on application. This chatbot will provide helpful information instantly. Multilayer Perceptron is used to train a datasets. Application will provide an information of PCOD, PCOS, Cancers and etc. It will give a causes of disease, symptoms and etc. It will help user to know about health problem or disease. This chatbot will provide helpful information

instantly. Every women didn't know about many women's health related problems this application will help to know about that problems.

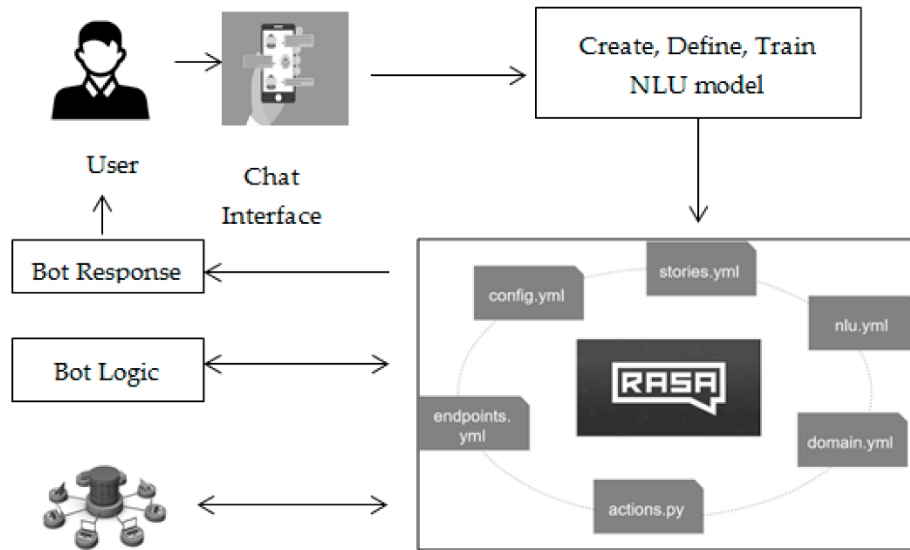


Fig -3: System Architecture 2

4. CONCLUSIONS

Thus we studied about The Women's Health and Protection Application is a cutting-edge technological solution designed to address the safety and empowerment needs of women in today's dynamic and sometimes challenging environment. It serves as a versatile tool for addressing various aspects of women's lives, promoting their well-being, and ensuring they have access to the support and information they need, particularly in times of distress or vulnerability. As this time cell phone can be the closest companion of client and client can remain in contact with their cherished one whenever. Anyone needs to make a call or communicate something specific in crisis at whenever from anywhere. We introduces an app which ensures the safety of women. This helps to identify and sms on resources to help the one out of dangerous situations. This reduce risk and bring assistance when we need it and help us to identify the location of the one in danger. It provides an information related health problems. As every should know about that health related problems for their health and for their love ones. This system aims to make a positive impact on the lives of women by promoting their safety and health related issue, well-being, and personal growth. As women continue to navigate a complex world, this system serves as a valuable ally, fostering a sense of security and empowerment.

5. ACKNOWLEDGEMENT

This is a great pleasure & immense satisfaction to express my deepest sense of gratitude & thanks to everyone who has directly or indirectly helped me in completing my project work successfully. I express my gratitude towards project guide (Prof. Brijendra Gupta) Information Technology, Siddhant C.O.E., Sudumbare, Pune who guided & encouraged me in completing the project work in scheduled time. No words are sufficient to express my gratitude to our parents for their unwavering encouragement. We also thank all friends for being a constant source of my support. As all the team members thank you for supporting each other.

6. REFERENCES

- [1]. B.Vijaylaxmi¹, Renuka.S², Pooja Chennur³, Sharangowda.Patil⁴, "Self defense system for women safety with location tracking and SMS alerting through Gsm network.IJRET: International Journal of Research in Engineering and Technology ISSN: 2319-1163 ISSN: 2321- 7308
- [2]. Shrushti Polekar¹ , Shivani Wakde² , Mayuresh Pandare³ , Priyanka Shingane⁴ , "Intelligent Medical Chatbot System For Women's Healthcare", ITM Web of Conferences 44, 03020 (2022) <https://doi.org/10.1051/itmconf/20224403020> ICACC-2022
- [3]. Dr. K Srinivas*¹ , Dr. Suwarna Gothane¹ , C. Saisha Krithika² , Anshika² , T. Susmitha², "Android App for Women Safety ",International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT)
- [4].<https://www.simplilearn.com/tutorials/deep-learning-tutorial/multilayer-perceptron#:~:text=The%20MLP%20learning%20procedure%20is,the%20predicted%20and%20known%20outcome>).
- [5]Wasim Akram, Mohit Jain, C. Sweetlin Hemalatha.,” Design of a Smart Safety Device for Women using IoT”.
- [6] VIKRAM CHANDRA¹, RAMPUR SRINATH²,” Analysis of Women Safety using Machine Learning on Tweets”.

