



# Women Safety Application With Hidden Camera Detector & Live Video Streaming

<sup>1</sup>Sahunthala S, <sup>2</sup>Hemanathan M, <sup>3</sup>Jeyavarshan J, <sup>4</sup>AkashKumar S

<sup>1</sup>Assistant Associate professor, <sup>2</sup>Student, <sup>3</sup>Student, <sup>4</sup>Student

<sup>1</sup>Department of Information Technology,

<sup>1</sup>Anand Institute of Higher Technology, Chennai, India

**Abstract:** Women's safety is an important issue facing society. Crimes against women like eve-teasing, and sexual assault, and there is a daily rise in domestic violence. In relation to security concerns, a smartphone is the easiest way to get help. This project tries to develop an Android application (OSA – One Safety App) that will assist in defending women in all circumstances they may face in their daily life. This Android app has incorporated various security measures that are developed efficiently. It can be utilized by women in risky circumstances by shaking their mobile phone multiple times, to quickly and easily access assistance or to avoid and flee in dangerous situations. GPS position tracking is used and live video sharing is the best system to offer a quick and easy manner for registered contacts to learn if the user is in distress and to make it simple for them to contact the person. The hidden camera detection in this app helps users protect themselves in many places and situations.

**Index Terms** – Global Positioning System(GPS), Magnetometer, Camera, Women Security, Smartphone.

## I. INTRODUCTION

Gender-based inequalities are one of the major issues of the present century. Although constitutional rights have guaranteed gender equality, Gender-based inequality indeed exists in many segments of societies around the world. Women of the 21st century have been somewhat successful in contributing to society and working side by side with men for many periods. However, The harm that occurs against women has been on the rise across the world in recent times. According to Antonio Gutters, the ninth Secretary-General of the United Nations, violence and abuse against women is among the world's worst human rights violations, affecting one in every three women in the world. For a better world, gender equality is a necessary condition. Gender-based violence against women restricts women's participation in decision-making, leading to a decline in living standards. Women's equal participation is essential for stability, preventing and promoting inclusive and sustainable development. Although the severity of violence against women varies, no country is immune, and there is a need to understand the root cause behind the crimes and solutions. Today, crime mapping and crime response are a major responsibility of law enforcement agencies. Criminal record data is maintained by law enforcement agencies and is not available to the public in an easily understandable form to take necessary precautions. Even though crime prevention is the main concern of the police. The human resource capacity of the police force is small relative to the population, and their services are sometimes limited to responding to crime rather than preventing it. Some wearable devices and mobile apps have been developed over the years to ensure women's safety. However, most of these apps and wearable raise an alert in the form of visual or audio cues or messages to contacts (guardians) or law enforcement agencies. These organizations do if a woman leaves town or strays away from their guardians Not serving the purpose. These systems use limited community intervention and are not very efficient in ensuring women's safety when needed. Often crime reaction, the study of crime, and prevention of crime programs are uncoordinated, leaving gaps in the protection of women.

## II. LITERATURE SURVEY

Sunil Kumar Sharma & P. Ranjana.et.al.(2022) .The author proposed a system that has Continuous location monitoring information through SMS. the Existing system has a few gestures that can send the GPS location by adding the contacts in the application [1].

Y.Deepika & K.B.S.L Vamsi.et.al.(2022).The author proposed an IOT device that uses GPS for monitoring the location and a buzzer to alert the surroundings and generates electric shock pulses which help to safeguard from criminals. Criminal records are sustained by law enforcement agencies whose access will not be shared with the public in any effortlessly accessible form[2].

Abhirooban T & Vidhya B.et.al.(2022). The author proposed a system with a trigger indicator with the latest AI central processing unit and a location detector that will detect the exact location. Using the latest cyber-security tracking methods will precisely locate the locations where crime has occurred. when there is a danger the victim must hold on to the device and it. the AI-powered By using their initial number that was registered with the service provider, the location detector is utilized to determine their current position and send an update to their immediate family or friends. [3].

Mohamad Amirul Syafiq Bin Peer Mohamed & Dahlila Putri Dahnil. et.al.(2021) The author proposed a system that has a Mapbox. which is used to show the GEO Location which is used to locate the person Location. The Mapbox is a much-detailed

version of maps. The existing paper has a few gestures that can send the GPS location by adding the contacts in the application. victims can not only alert people in close proximity of their situations but also get immediate help and action to prevent unwanted incidents[4].

R Rajesh & V Akshaya. et.al.(2021). The author proposed a system that is an exceptionally built surveillance system and an Android app for women in distress. The most proficient use of the ARM controller for the Smartphone gadget devours less force. This study uses a radio recurrence signal finder to locate cameras that are hidden. and found a security device with all the functions accessible with a single click. [5].

Sunil Ghane & Sakshi Milkhe.et.al.(2020).The author proposed a system that can scan the QR Code of the vehicle and send it to the saved contacts and if there is any mishap there will be a button that can trigger a message of live location. Automatic video, images, and audio capturing of the surrounding will take place which can then be used to catch the attacker[6].

Shaheena Sultana& Fatiha-Tus-Sazia.et.al.(2019).The author proposed a system that has a voice command or SOS Key which can send an alert message and the location every five minutes until the system is turned off. It will also record the audio for evidence purposes. offline mode is some of the most useful features of this system[7].

S. Gowri & Sindhu K.et.al.(2018). The author proposed a system that will provide permissions in it to access the web and track the present location of the user and send it to REGISTERED Contacts. First of all, users got to fill in their info within the application and they will edit their info anytime. We tend to use this application by voice or by a shake or by click and this application has an extra issue that's a sound recording module that might be used as proof. If Voice Recognition doesn't work properly, another process can mechanically begin (shake or click)[8].

R. Pavitra & S.Karthikeyan.et.al.(2017).The author proposed a system where there is an app for women that will utilize for women's well-being. It demonstrates the correct area where the individual is found and sends the point of interest through Short Message Service (SMS) to her relatives, guardians, and friends[9].

U Nethra & V Suma. et.al.(2018). The author proposed a system that has a device that is extremely portable and can be activated by a button that can send the location and capture the image of the attacker. The location and the link of the image captured will be sent to predefined emergency contact numbers or police via smartphone[10].

Jannatul Maowa & Ferry Wahyu Wibowo.et.al.(2017).In this paper, we discuss violence against women (VAW) and also different health issues of women. We have designed and presented a skeleton of a user-friendly mobile application named Women Empowerment which will contain different laws related to VAW and different health tips for women, which will help rural and urban women. It includes an emergency call system, which will be active by the victim women when they are in danger[11].

B. Bharathi & Gautam Patel. et.al.(2017). The author proposed a system that has dynamic GPS tracking in which the location is turned on and Users with the same app can monitor other users with this app through the dynamic GPS Tracking system through. The SOS button is pressed then an alert message which contains the name of the user, GPS Location, and a help message is sent via SMS[12].

Edward N. Cruz & Edward A. Fernandez.et.al.(2019).The author proposed a system with GPS tracking and a direct emergency call to the nearby police station with agile methodology this application sends a notification via SMS, video, and image capturing, and direct calls to the police and GPS tracking in times of distress[13].

Arifa Sharmin & Md.Al-Zihad.et.al.(2016).The author proposed a system that has a lock screen access and an instant siren on the receiver device. This can also be activated in silent mode, increasing the reliability of getting help from family members or hospital/police station personnel[14].

Bramarambika Thota & Ravi Sekhar Yarrabothu.et.al.(2015).The author proposed a system that will activate the application with a single click and send a GPS location through a URL to the saved contacts and also call on the first registered contact to help the one in dangerous situations. It will continuously send the message every five minutes until the "stop" button is clicked[15].

N Divyashree & R Revathi. et.al.(2016). The author has proposed a system that has two components: The User tracker portal to track the current location of registered users and the Android Application which sends SMS, and WhatsApp alerts and communicates to the user tracker portal with the user's current location. The current location and coordinates can also be retrieved[16].

Sunil Nayak & Vamsi.et.al.(2015).The author proposed a system that can trigger a calling function by swinging(Shaking) the phone, or by explicitly interacting with the application's user interface via a simple press of a PANIC button on the screen. The existing system will send a message with a few gestures[17].

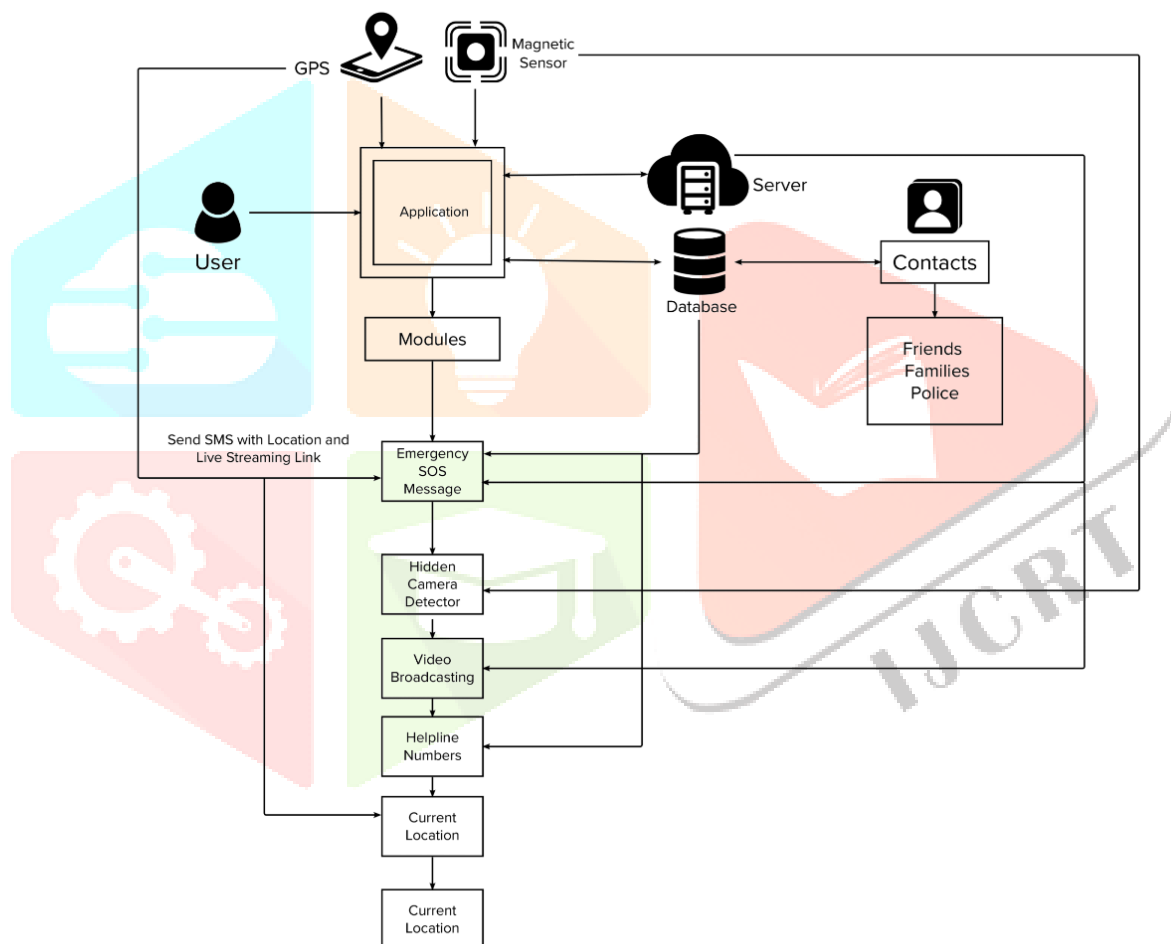
### III. PROPOSED SYSTEM

The proposed system overcomes the disadvantage of the existing system and contains all the specific capabilities inclusive of live video & location of tracking, a Hidden camera detector, and combines some other functions present in the existing system including GPS tracking and other features. GPS tracking can help in case there is no data connection available. The woman can also use any of the features according to her judgment of the situation faced by her.

#### Features

1. **Emergency SOS:** Sends an alert message to an emergency registered contact containing the GPS location of the user and also sends the live streaming link. The user has to enter five contact numbers manually. Whenever the user shakes the mobile phone three times, the app will send an alert message containing the user's name and location to the registered contacts. Also, a live streaming system is attached to the same SOS message separated by a link. The recipient can get the live streaming link through the message and then the recipient can watch the live video by clicking on the link. It enables audio and video recording for evidence purposes. The project has a FUSED LOCATION PROVIDER CLIENT API that will provide the user's latitude and longitude The Fused location provider manages basic location technologies such as GPS and WIFI and provides a simple API that you can use to specify the quality of service required. The FUSED API key is obtained from the Google developer's site

2. **Video Broadcasting:** Live video sharing can be used by Streaming Protocols such as HLS (HTTP Live Streaming), RTSP (Real-Time Streaming Protocol), and RTMP (Real-Time Message Protocol).
3. **Hidden Camera Detector:** This module helps us to detect both Digital and IR cameras which will help to identify any hidden cameras in any suspicious areas(Washroom, Hotel, etc.). In this module, there exist two types of camera detectors which are Digital Camera detectors & IR Camera Detector
4. **Siren:** A Siren that sounds a loud police siren. This can alert bystanders to the situation and in some cases prevent the attacker from continuing with his malicious intent.
5. **Helpline Numbers:** The woman can directly call emergency services through the feature Helpline Numbers in the application.
6. **Current Location:** The System acquires the current location by using Google Map API to find the user's location by using GPS. The API Key can be obtained on the Google developer's site.



**Fig 1:** System Architecture

## IV. EVALUATION RESULTS AND EXECUTION



Fig 2: Home Page

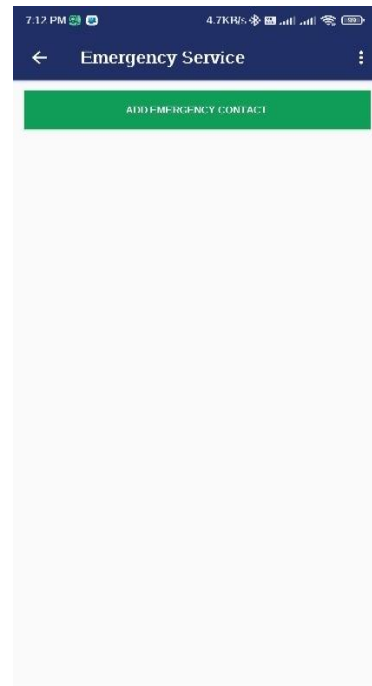


Fig 3: Emergency SOS

When you open the application in a mobile the Home Page(Fig 2) will appear. On this home page, various modules and features are there. If the user opens the Emergency SOS Module, Then the above Fig 3 will appear, Then the user can add the contact numbers of relatives and friends. Whenever the user is in trouble the SOS Message will be sent to the above added contact numbers.



Fig 4: Hidden Camera Detector

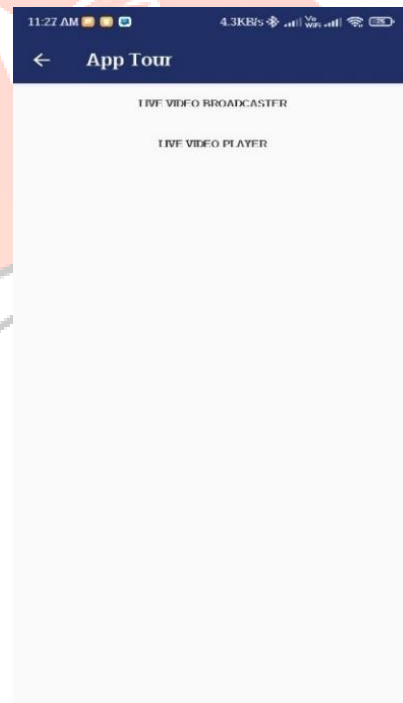


Fig 5: Video Broadcasting

Above Fig 4. Show the second module of the application. It is a Hidden Camera detector module, it's enabled users can find any camera devices in suspicious areas. There exist two detectors, In a Digital Camera Detector user just moves to the suspicious area, and If any device is found the application generates a beep sound, Another IR Camera Detector just shows the mobile device camera, user can just see via camera any IR camera found shows the blue color light shade. Both Live Video Broadcasting & Live Video Players are available in this module(Fig 5).

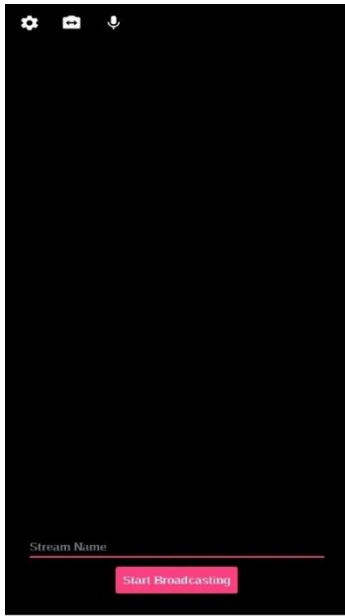


Fig 6: Live Video Broadcasting

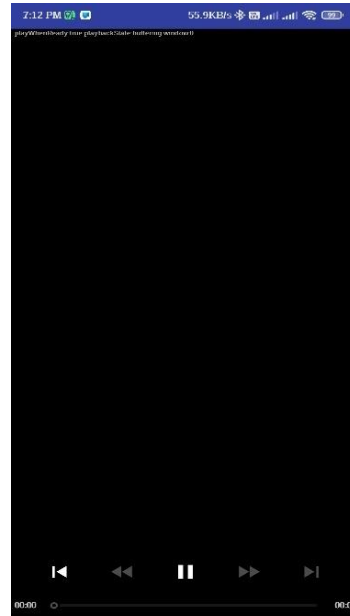


Fig 7: Live Video Player

The user should be entering the Stream Id in above Fig 6, It will be Broadcasting only when Stream Id is correct otherwise can't broadcast video. If family members or friends can see the streamed video, Enter the correct stream id then see the Broadcasting video in shown Fig 7.

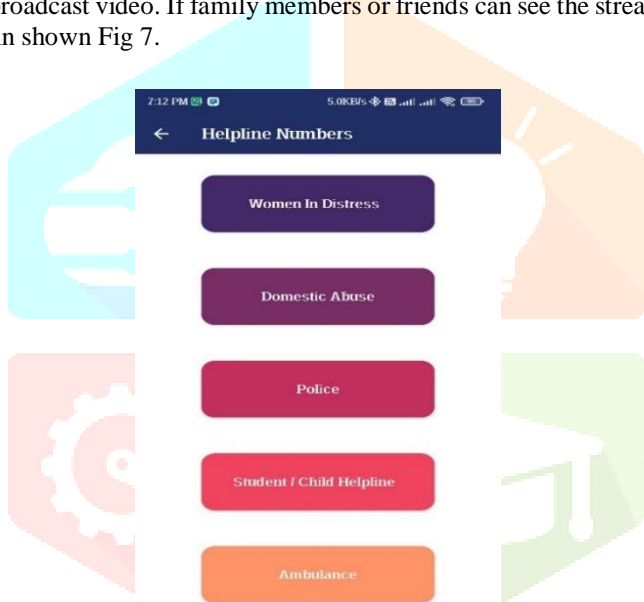


Fig 8: Helpline Numbers

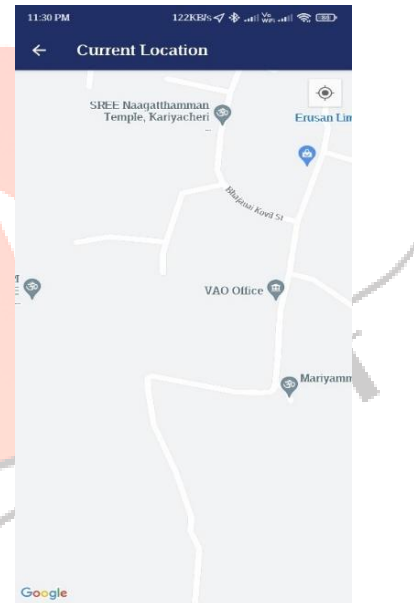


Fig 9: Current Location

Many of them can't know or remember the emergency helpline numbers. Fig 8 displayed Helpline numbers the user should make a call easily. Fig 9 shows the current location module it will show the exact location of the user. It works effective manner and provides the accurate location of the user.

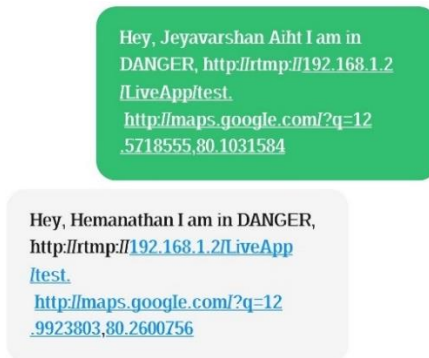
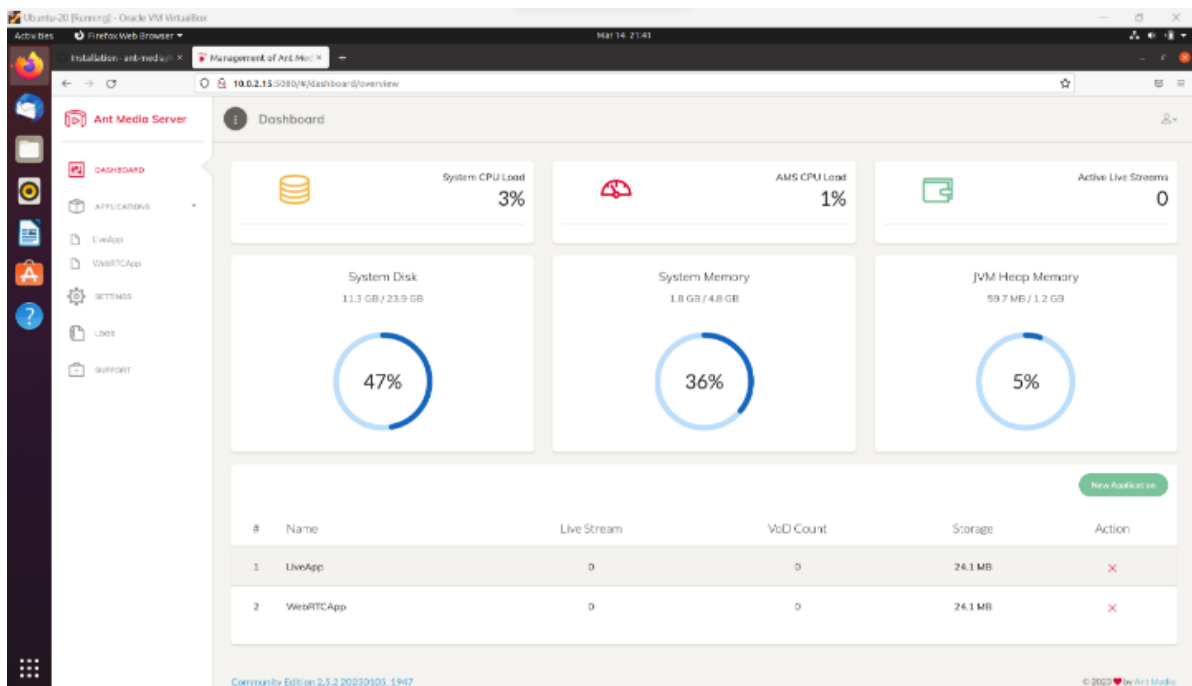


Fig 10: Receiver Message



**Fig 11: Server Dashboard**

Everyone individually configures the server. Using this server everyone should be easily broadcast and record the videos.

## V. CONCLUSION

This project is successfully implemented for the safety of women and their surroundings. We can send live locations and live streaming services through an URL in case of any abnormalities. In the coming future, we are reviewing the use of security technology in the defense sector and this will encourage advanced security technology with greater precision. There are many opportunities to develop or change this project in many ways in this field. Therefore, this project has an efficient scope in the future, where this idea can be turned into a more advanced security device.

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