A NOVEL VOICE RECOGNITION APPROACH IN WOMEN SAFETY SYSTEM

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ABSTRACT

Risk-based specifications stimulant could be a methodology for distribution appropriate countermeasures for the defense of the Women’s Safety System (WSS) supported the degree of risk. Women’s protection is that the most vital issue recently, and building a security system that may act as a rescue and forestall hurt within the event of a danger is very necessary, notably for ladies. A smart device for women's protection is planned that automates the emergency warning system by employing a pulse-rate detector and a temperature detector to mechanically notice possible atrocity victimization outlier detection. Additionally, the planned system combines wearable detector nodes with Associate in Nursing IoT unit, yet as associate in nursing automaton app, to form women's movement safer. Ladies will get immediate and complete protection by pressing the device's emergency switch. Within the event of a happening, this method will monitor the user's location in real time and send it to an area station house, friends, and volunteers. This device will give the user with the placement of the closest safe zone. Moreover, this method are often used each on-line and offline. It directly sends associate in nursing emergency tuned in to the members of the family and therefore the nearest station house.

KEYWORDS: Women’s Safety System, Sensors, emergency alert system

I. INTRODUCTION

Because of the growing variety of harassment against women, women's health may be a important concern. To help in resolution this downside, we have a tendency to propose a GPS-based ladies' well-being system with twin safety features. This device contains a system that ensures double warnings within the event that a girl is vulnerable or feels she is during a dangerous state of affairs. This framework may be activated by a girl if she suspects she is going to be during a tough state of affairs. It's helpful that if something terrible happens to a girl, she would be ready to use the crisis button. During a grab press dread system, if a girl is stricken within the head from behind, she will realize the chance to squeeze the emergency signal, and nobody might recognize she is in peril. This can be taken care of by our system. This device ought to be switched on before time by a girl if she is walking down a lonely street, through a dingy back door, or during a remote space.

Only the woman World Health Organization has been checked by the gadgets is allowable to start the framework via a finger impression review. Once initial turned on, the system needs the woman to unendingly check her finger on the framework each one second; otherwise, the device sends her location to the authorized hands variety via SMS message as a security live, and it conjointly sounds a bell on an everyday basis so near people will hear it. During this case, notwithstanding whether or not somebody hits the woman or she falls down and becomes unaware, she doesn't have to be compelled to do one thing as a result of the system doesn't receive her finger sign up one second and therefore starts the double protection operate. This device would be helpful in each saving lives and preventing abominations against girls. To realize this, the system makes use of a GPS detector, a GSM electronic equipment, LCD digital display alphanumeric display, LEDs, and a microcontroller-based circuit.

Ladies everywhere the planet are faced with consumptive actual molestation, because the variety of abuses and provocation against girls and young girls continues to rise, women's safety remains a significant concern. Cell
phones are one in all the gadgets that nearly everybody likes and uses to stay in touch with loved ones during this age of innovation. All they have could be a device that may be simply transported to any location.

This planned project manages a quick-reacting, affordable protection system for people, particularly girls, during which a girl in pain will request help just by pressing a button on this clever widget. The self-defence module for women's security is getting ready to a wise watch for women's safety. It will facilitate girls with inventions that are engineered into a smaller device. It should be able to assist girls with ingrained technologies. It's significantly designed for women's security and protection. It's a bearing button that ladies will use to lightweight native law enforcement officials once they are in hassle. Once this watch is enabled, it right away connects to the satellite via GPS. The world is then resettled via GSM, that conjointly includes a stun device that may deliver a non-lethal electrical stun in associate emergency to advise the aggressor.

If a crisis arises, the steered device is additional similar to a health system. These techniques are often hid within a coat (like a jacket for ladies). It's AN easy-to-transport contrivance with additional options and capabilities. The crisis press button is ironed against one in every of the coat's catches. The most aim of this technique is to alert guardians and cops to the position of the women. a conveyable GPS framework is employed to watch the person in question's current location, and a conveyable SMS is employed to transmit the message to the pre-defined numbers. There are some apps that scale back the chance of molestation by causing SMS, however in our model, we have a tendency to even have a sound circuit, that is additional helpful for folks that are tested.

II. RELATED WORKS


S. Kozina[3] developed a system that uses a PIC16F876A microcontroller and a SIM808 module with GPS, GSM, and GPRS support to alert treasured ones once the crisis button is ironed. I. Soomro[4] Establishes a structure supported the facial highlights. A report is generated if the external look could be a danger-based articulation. GSM and GPS square measure wont to build a secure device around [5]. The message is distributed out victimization pre-programmed versatile numbers that embody the casualty's body stance moreover as her location. With the help of a synchronized Bluetooth link, free installation of associate degree humanoid
application and militarization of a tool happens in [6]. The sound and video that are captured square measure sent to the phone numbers that are pre-set within the app aboard the world as a decision and a message to warn them.

associate degree humanoid application is formed in [7] that gives the situation of the woman in peril by providing pretend calls, video causation, location, and treatment knowledge. Body movements, pulse, associate degree internal heat levels square measure detected victimization sensors in [8] with the assistance of a reliable protection system that features an ATMEGA8 regulator, associate degree Arduino device, and advanced sensors. 3 sensors square measure utilized in [9],[10],[11],[12],[13], particularly the heart beat, temperature, and measuring instrument [14]. These sensors square measure wont to discover any anomalies and a message is distributed to the darlings via GPS and GSM module to warn them.

III. EXISTING SYSTEM

It is extraordinarily tough to notice wrongdoings committed against girls within the current system. Regardless, there are a couple of places wherever CCTV cameras are mounted, and therefore the account has been latched. They’re specifically accustomed behave when one thing went on. Their solely selection for seeking help is to use their mobile to create an impact on their loved ones. It's not possible for the bulk of girls to urge a hold of their mobile therein crucial moment. If they are doing or not, it's tough to convey one thing concrete quickly before one thing violent happens. It is also improbably difficult.

When a tangle happens, the representative enters the vehicle and presses the adjustment programmed into the GPS. The message is distributed to a particular cluster of the association employing a GSM module connected to the GPS and switch. Despite the very fact that this framework is mostly successful, there are a number of disadvantages because of the very fact that the drivers don't seem to be continuously reliable. An application-based model is another latest technique.

It has GPS, GSM, and a covert operative camera inbuilt. The shopper ought to register for the emergency numbers. This is often associate mechanical man programme that has all services; however it's the disadvantage that if the victim's cellular phone is discarded by the opposing individual, this model cannot be used effectively. We recommend a model to beat these obstacles.

IV. PROPOSED SYSTEM

The challenging circumstances that every lady now faces prompted the development of a protection system to assist the ladies in completing the work that they jumped at the chance to do. The application allows women to overcome their fear of wandering and complete their tasks.

The framework contains fragments that depict a quick-response cost-protection structure for individuals, particularly women, in which a woman in a difficult situation may call for help simply by setting a watchword, and the application will become dynamic as a result of talking the expression. Self-insurance for women's welfare tends to be an outstanding application for women. It can assist women in their growth.

The modules are chosen based on the basic investigation and the criterion of wellness utility, as shown in figure, and the work process is referred to as movement outline, as shown in figure. The following is how the selected modules work:

- When the client turns on the computer, all modules are enabled at the same time.
- The band will determine if the crisis switch was pressed twice in less than five seconds.
- If the switch is not ironed or squeezed for associate extended amount of your time, the band will stop moving.
- If a band shopper is in peril and presses the crisis start her band double at intervals 5 seconds, a crisis SMS are sent on to the closest police headquarters, volunteers, and therefore the band client's relatives.
A. PROPOSED BLOCK DESCRIPTION

1. PUSH SWITCH:
As it is squeezed, it sends a signal to the microcontroller, which then sends the GPS coordinates to the police headquarters or relatives via GSM.

2. CONTROLLER:
The Arduino NANO is a low-power, elite CMOS 8-cycle microcontroller with 8K bytes of programmable Flash memory embedded in the framework. It has less features than other microcontrollers, and it is also more easily accessible and affordable in comparison to other microcontrollers.

3. SENSORS
Different sensors are used, such as a pulse sensor and a temperature sensor, to detect the heartbeat, declination, and vibrations of women. The Arduino is connected to a heartbeat sensor. Using Arduino c programming, the heartbeat's range can be modified. The sensor is also attached to the Arduino-NANO board to decide whether there is something wrong with the user's health. The Arduino-NANO board is also connected to a press button sensor, which tracks vibrations (if there are any extraordinary or unusual vibrations). For each 20 ms delay, the results are reported.

B. MOBILE APPLICATION

1. Voice Speech to Text Module:
The Voice Speech-Text module is triggered when the customer speaks a word. If the selected watchword coincides with the enrolled expression, the application is initiated, and the message is sent from the enrolled expression, while the sound annual module starts operating at the same time.

2. The Location Tracking and Address Finding:
It necessitates a GPS-enabled portable. GPS and WI-FI will be used to monitor the area. It decides the longitude and attitude of the customer's current position. The territory is searched using longitude and degree, and the true position is provided by methods for a post. The Internet should be available on a variety of devices. The customer's precise territory will not be found by the GPS incapacitate system; instead, the longitude and extent of the area will be sent.

3. Alert Message Notification Mod:
The meridian and extension are organized by the APK computer programme Interface (API). Exploitation this verifiable cared-for, a pre-addressed emergency message is distributed to the noncommissioned contact variety close to the meridian and degree. If the framework is not accessible on the customer's versatile, a pointy message is distributed, and once the framework is open, the message is distributed to the desired numbers.

4. Mobile Alert Module:
It encourages us to inform customers about the low battery warning whenever their versatile charging drops below 30%. There is a sign-in page for the enrolment engagement in Driving All Clients. Customers must fill out their data, which they may change at any time. There are three ways to get into the application: "click the grab," "shake the phone," and "voice affirmation." If voice affirmation doesn't work, it moves to the other two methods.

V. METHODOLOGY

The methods flow can be described in three process.

A. Physical Process
When the ladies are in a position to respond, the cycle stream begins. It includes a catch that the lady can pinch if she feels threatened. The bell is activated when the catch is squeezed, creating a loud clamour to alert anyone nearby who can assist her. The ready part is then switched on.

B. Automatic Process
The lady would possibly be unable to answer and use the manual portion within the overwhelming majority of cases. During this means, alter the device with a pressing issue, temperature, and heartbeat rate detector, and use a mixture of those sensors' readings to avoid false positives. The prepared instrument is triggered once one amongst the 2 sensors senses associate in nursing anomaly. An influence police investigation resistance detector is that the pressing issue detector (FSR). With a little increase in power, the opposition shrinks drastically. The opposition price is modified to a straightforward voltage between zero and five volts.

C. Alert Process
During a dangerous situation, the ready part is triggered using one of the above instruments. When the ready instrument is enabled, GPS and GSM are used to transmit a message to family members and authoritiescontaining the location of the casualty. For easy access, the region is distributed with location with the help of Google Maps interface.
D. Results

The projected framework has the advantage of being labile, as an example, in things wherever it's humanly doable to succeed in the device, it permits for the easy activation of the prepared instrument via an easy catch, and in things wherever it's unreasonable to expect a response, it truly recognizes the threat mistreatment the sensing element. The projected structure is additionally light-weight, efficient, and straightforward to move. it's fast and straightforward to use. There’s no provision for an internet link. The sole demand is that the realm has transportable signs that may be modified.

HARDWARE:

Fig 5.1 Hardware
Women Security

SENSOR DETAILS

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<table>
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<tr>
<th>Temperature</th>
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<tbody>
<tr>
<td>Heart Beat</td>
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EMERGENCY

Fig 5.2 Output Image-1
VI. CONCLUSION AND FUTURE WORK

The aim of this task is to structure and build an Android application that is open to provide the best possible situation for the individual security system. This plan will address a large portion of the important issues that women face and will assist them in feeling secure. The recommendation a part of the appliance grants voice-based approval and locates the person's territory in terms of meridian and degree, which may be half-track victimization space maps.

The primary goal of creating a lady health gadget is to serve as a safety net and prevent any mishaps at a time when they are most vulnerable; especially for women. A clever gadget for ladies' protection is designed through the proposed system, which robotizes the crisis ready framework. This system identifies and sends warnings for
the darlings with the area directions of the ladies in critical occasions without the necessity of her association. It naturally sends a crisis call to family members and nearby police headquarters.

REFERENCES


