

# IOT ENABLED SAFETY SYSTEM FOR CHILD AND AGED PEOPLE

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## **Keywords:**

Raspberry pi, Sound Sensor, Vibration Sensor, Moisture Sensor, Heartbeat Sensor, Temperature Sensor, RFID Reader, Camera, Power Supply.

## **Introduction:**

Child security in school campus is most important in building a good society. Large number of children travels to the school every day in India. Children go in different modes of transportation. Parents are always worried about the safety and security of their child .To track and resolve such issues we proposed an enhanced security feature system .This project intends to provide location and health tracking system which ensures the safety of the school going children. Parents can monitor the child's location and health in real time so that they can ensure that their child is safe. In some cases, kids forget to leave or enter school bus or even miss the bus from school. The proposed system will help the parents/guardian to know the location of the child in case of any missing happens. This system will provide guidance for the user where they can track the location of the child and monitor the speed, distance; pulse rate of the child, as well as it shows the path travelled by the child.

In case of emergency situations parent receives notifications from the system through an application and can send alert information to the concern authorities. Android developer studio is one of the best tool or environments to create android applications to mobile. In this proposed system we are building monitoring system for children as well as senior citizens. In current trend, parents may have an opportunity to track their children's locations and their health issues by using the GPS tracker devices and this device will also send the picture of the accused person to the registered mail-id. In this parent can monitor their children from a remote place and if children under any problems in the school campus. The same system can be used for the aged people to monitor and ensure their safety as well as health.

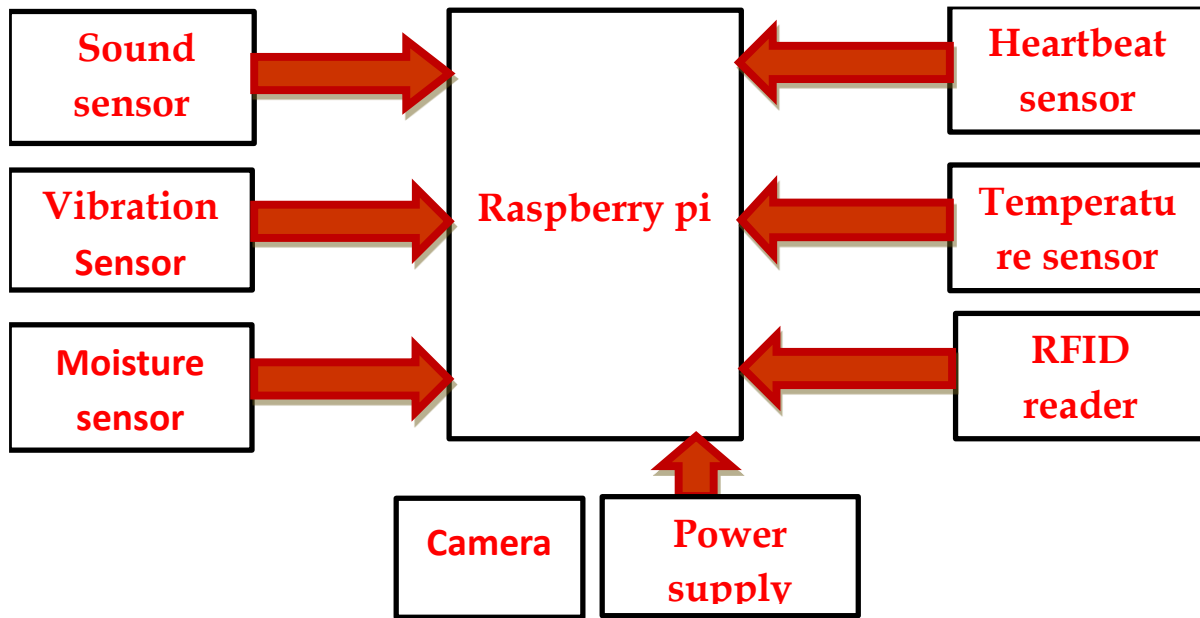
## **Objectives:**

1. To track the child and aged people by using GPS.
2. To check the child & aged people health by using different sensors.

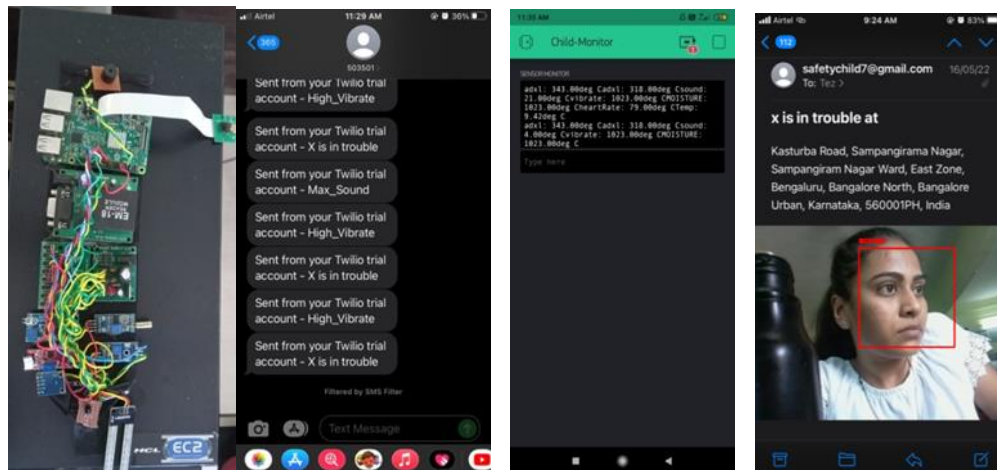
3. To send a alert messages by using GSM (Twillo).
4. To identify the signs and symptoms of abuse by using Pi camera.

**Methodology:**

In order to address the child safety and aged people concern, smart tracking system has been developed. In this project, Raspberry Pi acts as the main heart of the system, Pi camera is also been used. In order to track the child and aged people, the proposed system monitors the location by using GPS so that if they got missed parents/guardians can easily be identified and also regular monitoring of their health, so that if there is any problem occurred then it will immediately send the alert message through GSM(Twillo).



**Results:**



**Conclusion:**

All parent wish to shield their children from real dangerous world they will inevitably undergo hard times. Normal behavior of any child depends on the child's age, personality, and at the end the physical and emotional development. A child's behavior may be a problem if it doesn't match the expectations of the family or if it is disruptive. So Parents may face many problems with their children, when they let them free without any observation. There are many tracking system available in present time, these systems use different technologies but each of them has one or more limitation such as not suitable for many children or monitor how far the child from their parent without monitoring the environment surrounded the children or can monitor only one state at a time. While the designed tracking system allows parent to monitor multiple children and they will be alarmed if any child be in danger state.

**Scope for future work:**

In future, the proposed system can be improvised by adding other parameters that are required for children and aged people safety. The system can be developed further by implementing additional health monitoring sensors like, blood pressure, respiration rate. The system accuracy can also be improved by increasing the trust worthiness of the device to avoid any discrepancies, as in medical and health care, a minute error may cost a life. In addition, we can also add wireless camera which ensure the safety.