



Automatic Intimation and Alert for Helping Deadly Patients Using GSM

Heena.G¹ Abinaya.S²

¹UG Scholar, ²UG Scholar

^{1,2} Department Of ECE,

Sri Krishna College of Engineering and Technology,
Coimbatore, India

[¹heenaguna6@gmail.com](mailto:heenaguna6@gmail.com) [²abinayas911@gmail.com](mailto:abinayas911@gmail.com)

Abstract - The main proposal of this method is that, monitoring of deadly patient is at risk due to the shortage of nurse/doctor especially in night, and also the restrictions of person staying with patients. In order to overcome that, as per the medical requirement we propose this "Automatic Intimation and Alert for Helping Deadly Patients Using GSM". In this proposal we design the service of collecting the data of the patients like heart beat and motions, we use total of two sensors like heart beat sensor and motion sensor. These sensors are used to sense the data. By using motion sensor we can help the patients by alerting the person staying with patient and heart beat sensor is used to analyze the pulse rate of the patient.

Keywords –Heart beat sensor, GSM Model, Arduino uno

I. INTRODUCTION

Recently, the health care sensors playing a vital role in medical field. The patient monitoring systems is one of the major improvements because of its advanced technology. So we are here, just connecting the motion sensor and heartbeat sensor so that simultaneously we can monitor the patients condition and hence ruling out the use of the motion sensor and other devices to intimate and alert the condition of the patient. This project alert to Nurse/Doctors as well as patients relatives especially during night stay for take care of patient in the hospital also give the intimation about patient health to the Nurse/Doctors in case of emergency.

II. MATERIALS AND METHODS

In this proposal many strategies have been implemented to achieve alerting and intimating to the Nurse/Doctors or patient relatives. Motion sensor are used to alert the



patient relative if the patient requires any help ,even in the absence of patient relative through GSM. This alerting system is provided because of the restriction in the hospital of person staying with the patients Heart beat sensor is used to intimate and alert the Nurse/Doctor in case of emergence to the patient.

III. PROPOSED WORK

The Figure-1 shows proposed work of Automatic intimating & Alerting System with GSM. Arduino uno play very important role in this project that will measure parameters of patients by using different types of sensors like Motion sensor& Heart beat sensor.

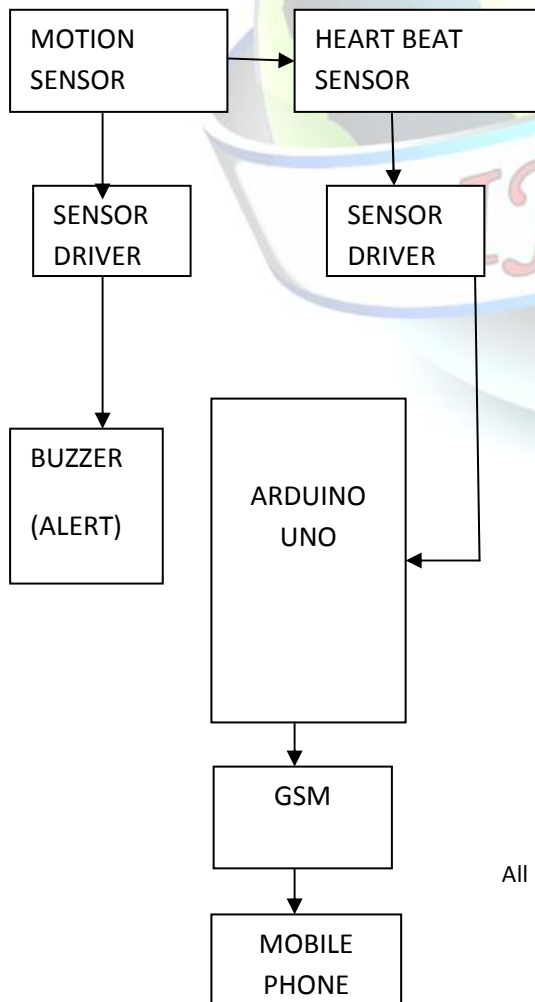


Fig-1 Block diagram of Automatic intimating & alerting system

This proposal describes the design of a simple, microcontroller based heart beat rate& motion detector measuring device with gives the information. Heart rate of the patient is measured from the index finger using IRD (Infra Red Device) sensors. The device alarms when the heart beat & the body temperature exceed the provided threshold value. This threshold value is defined by the programmer at the time of programming of arduino. The threshold value is as 20 to 120 pulses per minute for heart beat indication .

IV. WORKING

The main purpose of motion detection is to sense an intruder and send an alert to your control panel, which alert your monitoring center as well as the patient relative. This strategy of alerting is done in two ways depending on the motion of a particular patient. This motion is differentiated by ,if the motion of the patient is normal(i.e a regular moment of a deadly patient) this motion sensor will only alert the patient relative , since the patient need any help , secondly if the motion is too high and continuous the heart beat sensor will automatically sense the human body(patient) and if the pulse is too low or even too high it will automatically intimate the Nurse/Doctor through GSM and also alert the patient relative simultaneously. In order to avoid the false alarm we use a dual technology motion sensor which is a combination of passive infrared (PIR) & microwave sensor.



Information about Heart Rate is transmitted wirelessly to the nurse/doctor which is not in the vicinity of the patient through GSM technique. The sensors sense the information (All parameter of patient) and transmit it through GSM Modem on the same frequency as on which cell phones work.

INTERFACING- An Arduino is actually a microcontroller based kit, here arduino acts as an interfacing device between the microcontroller and GSM (**Global System for Mobile Communications**). There are different kinds of GSM modules available in market, Indoor coverage is also supported by GSM and may be achieved by using an indoor picocell base station



V. CONCLUSION

This “Automatic Intimation and Alert for Helping Deadly Patients” using arduino uno will be extremely useful for hospital application and in various emergency cases. This system is useful when the patient in critical condition. This project is useful for measuring the parameter of patient with the different sensor and also obtaining the message about patient health.

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