SMART FIRST AID SYSTEM BASED ON AN UNMAMMED AERIAL VECHICLES

Objective(s) of the Project:

The goal of this Smart System is to promote the use of First Aid in critical situations using modern technology.The base concept is to use a drone that carries a first aid kit and has real-time audio and video communications capabilities.It used a combination of Internet of Things (IoT) technologies to request emergency medical assistance and also determine the digital remedies based on complaints.

Brief Description and Plan:

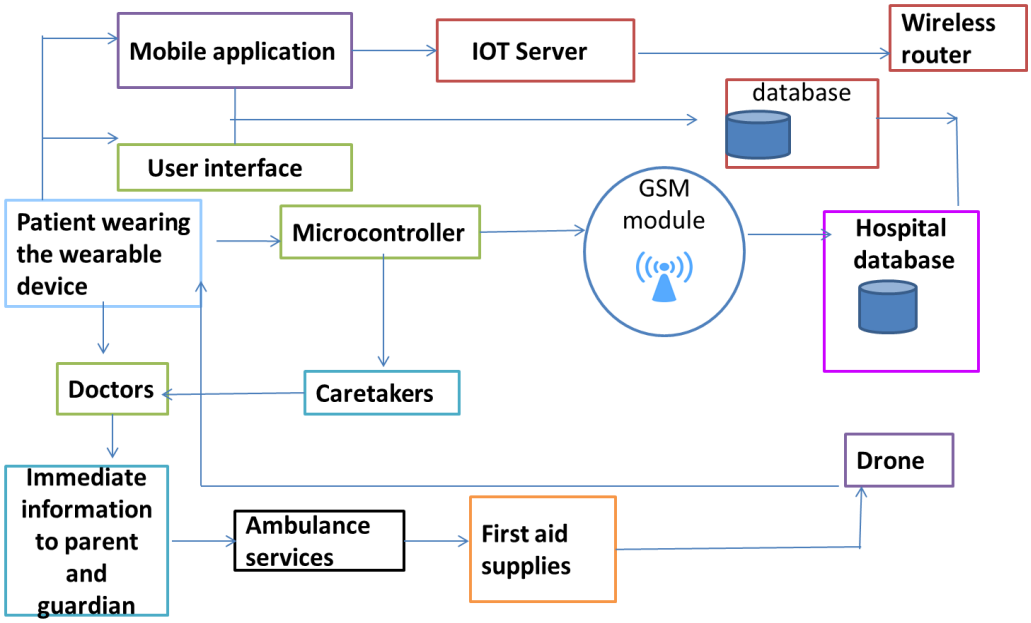
Nowadays, People participate in sports and physical activities to improve their overall well-being, health, fatigue resistance, and, in some cases, interpersonal relationships. Our main objective an advanced first aid system is proposed for monitoring elderly/paralyzed patients at risk of falling and for providing first aid supplies using an unmanned aerial vehicle. A smart First Aid system monitors and makes decisions in accordance with the fall detection device algorithm. The proposed FDD detects a body fall and the HR measured is abnormal, the FDD sends messages to the call emergency centre with the patient's information (ID, health status, and location). It is consist of a microcontroller, two biosensors (HB and ACC) for HR and acceleration, and an accelerometer. A GPS module for tracking location and a GSM module for sending a notification message to carers' smart phones at a call emergency centre. The smartphone at the call emergency centre serves two functions: it receives messages from the FDD and it plans the path for the UAV. The carers in the CEC receive messages to display on the Smartphone's LCD. As a result, the first aid package will be prepared based on the patient's condition and delivered to the patient via UAV using the coordinates received in the message.

The experiment consisted of five steps:

- First, the carers received an FDD message on their Smartphone.
- Second, carers plotted the flight path with the Autopilot program's waypoint mode.
- Third, the UAV takes an autonomous flight path from the CEC to the patient. The time it took to deliver the first aid package to the patient's location by Unmanned Aerial Vehicle (UAV) was calculated using the GPS timer.

- Fourth, the carers dispatched an ambulance to the patient's location and calculated the time it would take the ambulance to arrive using the Smartphone timer.
- Finally, the average time savings for the four locations was calculated.

Block Diagram:



Abstract

The proposed system is that invented a drone for the elderly that can help people when they are not well with the help of a fall detection sensor we will be able to help them.The present invention relates to a smart first aid kit with cloud server facility which consists of controller unit, RF module, emergency button, speaker, LCD screen, GPS and battery power supply. In the present disclosure, as the emergency button is pressed, GPS location of the user is shared to the nearest hospital along with ID through wireless communication. In the present invention, RF modem and Wi-Fi modem is helpful for communicating the information to the nearest hospital and assists the patient to take the medicine on the time with the help of speaker.

Claims:

1. A smart first aid box with a gateway node and a cloud server consists of
    a) GPS
    b) a LCD screen and a RF module
    c) a speaker
    d) an emergency button

2. The box as claimed in claim 1(a), by increasing the signal range in remote area and any medicines can transport by using the drone technology.

3. The box as claimed in claim 1(b), wherein the LCD screen displays the name of the medicine and dosage of the medicine needed to be taken by the user and the RF modem and Wi-Fi module logs the data

4. The box as claimed in claim 1(c), wherein the speaker alerts the user to take medicine according to the prescribed time interval provided by the doctor.

5. The box as claimed in claim 1(d), wherein as the emergency button is pressed, GPS location of the user is shared to the nearest hospital along with ID through wireless communication.