Smart Ambulance using ESP32, Raspberry Pi and Cloud(AWS/Ubidots)

Project Overview

This is an IoT based system which sends the real-time data of patient to the doctor's screen via cloud. It sends the patient's data (Blood Pressure, Pulse Rate, Body Temperature, etc.) from the sensors which are attached to human body and interfaced with ESP32 microcontroller which eventually sends it to Raspberry Pi and then to cloud where the data is stored and is displayed on the doctor's screen.

Problem and Solution Statement

When a person is to be taken to a hospital during emergency situations, the doctors in the emergency ward do not get the current condition of the patient until the person reaches the hospital. This system will give the doctors, much needed preparation time by sending them the real time condition of the patient, so that the person can be treated as quickly as possible as time is a very critical factor. Moreover, the doctor can also send instruction to the ambulance staff while they are on their way to the hospital.

Benchmark

Current projects on smart ambulances mainly focus on traffic control problems. This project focuses on the medical condition perspective of the person which we feel is very important, so even during heavy traffic conditions, the doctor can keep track of and maintain the health condition of the patient.

Implementation strategy

1. Search and Decide the sensors that are needed.
2. Interfacing the sensors with controller.
3. Connect the controller with Raspberry Pi and cloud.
4. Learn about the cloud and its implementation.
5. Setup the cloud and retrieve data to cloud.

Contributors

Name	Roll no	Contact No	Email
Nishant Rupareliya	16IT110	7203892559	16it110@charusat.edu.in
Sahil M Patel	16IT112	7698365005	16it112@charusat.edu.in
Hipal Sakhreliya	16IT113	9879686901	16it113@charusat.edu.in