

IOT Based Weather and Health Monitoring System for Tourists

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ABSTRACT:

For sustainable tourism development, use of tourism resources should be ensured by appropriate development and utilization considering environment protection and nature conservation. In this paper, we developed the smart tourism monitoring device to measure the number of visitors and environmental data of sightseeing spots such as temperature and pressure. The field data measured by the device will be provided to the user via a big data analysis. Tourism is one of the most dynamic industries in the world, but it has also an industry to be greatly and directly affected by the 4th revolution, as can be evidenced by the impact of the internet in the evolution of this industry. Disruptive technologies, including IoT play a crucial role in the way of understanding and managing this industry and especially in how the offer and demand are linked. The great diversity of IoT applications in the tourism industry defines the competitiveness not only of the private companies involved but also of the destinations which are being transformed into Smart Destinations as a natural evolution from Smart Cities, which are influenced by the tourism sector.

KEYWORDS: ESP32 Microcontroller, BMP280 Sensor, MQ135 Air quality Sensor, DS18B20 Body temperature sensor, Buzzer, Emergency Button, GPS, Red led, Green led.

I INTRODUCTION:

Internet of Things (IoT) is very important in smart tourism that supports tourist activities before, during, and after the trip... This system will help local or international tourists to keep themselves safe, secure and alert while travelling various tourist spots throughout the country. Disruptive technologies, including IoT play a crucial role in the way of understanding and managing this industry and especially in how the offer and demand are linked. The great diversity of

IoT applications in the tourism industry defines the competitiveness not only of the private companies involved but also of the destinations which are being transformed into Smart Destinations as a natural evolution from Smart Cities, which are influenced by the tourism sector. The proposed system will use Global Positioning System (GPS) to show safe routes of various destinations and track a tourist everywhere in his/her travelling phase. This system enables to base station to track the location and monitor health of tourists using GPS module and wireless body area sensor networks (WBASNs), such as temperature sensor, altitude, pressure etc. The data coming from sensors and GPS receiver send data by using IOT Server (Blynk Server). Also, a tourist can ask for help by pressing the emergency button which gives the alert to the other tourists or local authorities.

II OBJECTIVE:

In the First stage we created a module which gives instant weather updates to the tourists. In the Second stage we added a new module which indicates body temperature, using GPS, a module is setup for live location update as well as emergency button which will help us in emergency.

III PRACTICAL DESIGN OF PROJECT: WORKING PRINCIPLE:



This system will help local or international tourists to keep themselves safe, secure and alert while travelling various tourist spots throughout the country. The proposed system will use Global Positioning System (GPS) to show safe routes of various destinations and track a tourist everywhere in his/her travelling phase. A safe route notification alerts a tourist about the safest route of a destination even though he/she is not familiar with the tourist zone. This project gives an ability to track the location and monitor health of the tourist in real time who become lost and get injured in journey. Information Such as temperature sensor, altitude, pressure, Air Quality. The data coming from sensors and GPS receiver send data by using IOT server (Blynk server) will be Displayed on the APP. Also, the tourist can ask for help by pressing the emergency button. Which gives the alert to the location authorities/tourist guide. And also a Emergency Chat box to communicate.

IV CONCLUSION:

In this project, we developed the IoT enabled tourist monitoring device installed to tourist. The developed device not only provides the security, but also measures the data necessary for tourist such as the concentration of fine dust (air quality), temperature and pressure, altitude, and live tracking. The data measured by the device will be provided to visitors through a IOT based Blynk Server. In the next stage Body and Location updates will be given for the Tourist.

V ADVANTAGES FROM ABOVE PROJECT:

- Real time Monitoring.
- Reduction of healthcare cost.
- Accuracy is high.
- Self-Protection
- Smart way to monitor Environment

VI RESULT:

This project is well prepared and acting accordingly (including all the hardware and software) as per the initial specifications and requirements of our project. Because of the creative nature and design the idea of applying this project is very new, the opportunities for this project are immense.

OUTPUT FOR PHASE 1:



OUTPUT FOR PHASE 2:



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