Review on IoT Based Smart Interactive Voice Talking Plant

Soham Bagdane[1]
Diploma In Computer Engineering
Guru Gobind Singh Polytechnic
Nashik, India

Aryan Bhabad[2]
Diploma In Computer Engineering
Guru Gobind Singh Polytechnic
Nashik, India

Akash Bari[3]
Diploma In Computer Engineering
Guru Gobind Singh Polytechnic
Nashik, India

Daksh Balkawade[4]
Diploma In Computer Engineering
Guru Gobind Singh Polytechnic
Nashik, India

Abstract— As we can see in today's world only some devices like PC's and mobiles are connected to internet. Now-a-days world is fully overtaken by the internet and internet of things. Internet is use for basic need of all human beings. The Internet of Things (IOT) is the network of physical objects. It simply means to monitor a physical device or machine, or it is inter-networking of physical devices which is embedded with electronics, sensors, software and network connectivity to enable it to achieve greater value and services by exchanging data with the manufacturer. This project is designed as a plant monitoring system based on IOT. In this project we used different modules such as IOT, Node MCU, Temperature sensor, Moisture sensor, Humidity sensor

Keywords — IOT, Humidity, Moisture, Monitoring, Temperature

1. INTRODUCTION

Especially relevant in an IoT paper is the IoT cloud platforms that store data arrived from boards like Arduino. In the first part of this IoT paper, we will search how to use sensors to collect environment information using Arduino and how to send this information to the cloud.

In addition, in the second part of IoT paper, we will search how to enable triggers on the sensor values stored. This paper describes how to build a smart plant monitoring system that controls the plant health status.

This Smart plant monitoring system based on IoT can be accessed remotely using a browser so that it is attainable to verify the plant health remotely.

2. PROPOSED METHODOLGY

The architecture is for a smart based talking plant. From a user's computer, a running is embedded. As in runs the program, through the detection of the sensors, it sends direct input to the plant owner as it alerts via or social media posts.

The mobile Application enables this to happen. Plant display is optional, but if the user might want to visualize the soil moisture or the amount of light a plant it should be considered.

The Talking Plant, temperature, soil moisture and two motion sensors for the functionalities.
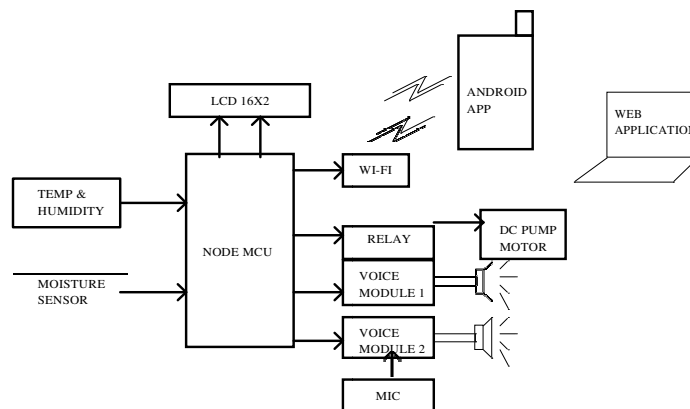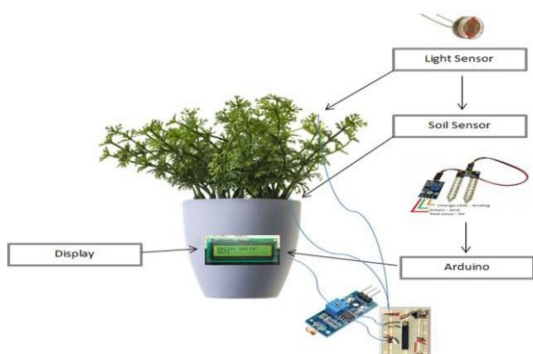
The system is based on Node MCU microcontroller used.

On system side, the data is collecting from moisture sensor and humidity sensor, it will monitor plants soils and environment temperature then all data will send it to Node MCU.

If the temperature High and soil water level get low or high then it will give notification to user in terms of voice. On user side, user has to use android app or web application. User will take action accordingly the notification.

3. LITERATURE SURVEY

In this system used Arduino which allow monitoring plant. The focus of system is to sensor value stored then this value going send user side on their mobile application as well as in terms of SMS. .[1]

In this system they introduce a model that interact with plants cultivated in automated farm system based on internet of things (IoT) and fuzzy logic. The communication of plants and humans apply chatbot algorithm for sending/receiving messages.[2]

The focus of this system to overcome the problem related agriculture for that they implement hydroponic system using IoT technology using Node MCU.[3]

In this paper, they propose IoT enhancing the

experience of personal gardening as method of therapy for mental health patients, given a belief in its role in person mood and general positivity.[4]

The focus of system is environmental parameters such as concentration, collaboration and learning performances. The learning object to promote ecological learning space. [5].

4. ADVANTAGES

- It can optimize water level as per soil moisture and weather predictions with the help of moisture sensors.
- It can determine when plant needs to be watered based on local weather data.
- It helps you have better control on your plants.

5.DISADVANTAGES

- This system is not battery operated

- Internet is required

6.SYSTEM REQUIREMENT

- Node MCU
- Operating Voltage: 3.3V.
- Input Voltage: 7-12V.
- Digital I/O Pins (DIO): 16.
- Analog Input Pins (ADC): 1.
- UART: 1.
  - LCD 16x2
- Operating Voltage is 4.7V to 5.3V
- Alphanumeric LCD Display module
- Current consumption is 1mA without backlight
- DHT11 Sensor
- Moisture Sensor
- Relay
- DC Pump Motor
- Voice Module
- Arduino IDE
- OrCAD
- Altium

7.FUTURE SCOPE

The smart interactive plant system will send alert to user smartphone when some parameter value is out of the range and system monitoring of health status of plant.

We can be improved the system for visualizing sensor data, designing learning tasks and resources.

8.CONCLUSION

This whole paper mainly focuses on two results. The first result is to help user to update their plant health status accordingly with minimum requirements on environmental issues and mostly the basic to encourage happy relationship between plants and people as a lot of people are afraid of plants. Not they are not green handed. The idea of taking good care is a responsibility. This makes it possible for them to have a plant in their lives. As Arduino came into the picture in bringing a better solution for plant care and protect plants and nature from being ruptured. And the second result of our paper is to measure the humidity, temperature and moisture of the plant root and make the plant grow in a well suitable environment without the use of soil as per the concept of hydroponics.

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