

PAPER TITLE :- Aurdino based Automatic Plant Watering System with Internet of Things

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PROBLEM MENTIONED/SOLUTION OBTAINED:- , the major drawback is “if water level is low in the tank the motor get damage ,due to excessive of heat “.For this we use a ultrasonic sensor and temperature sensor. The ultrasonic sensor is used to detect the level of water in the tank and also temperature sensor to detect the temperature of motor. When the temperature of motor reaches above threshold value the whole system is automatically turn off.

ALGORITHM USED:- The moisture sensors measure the moisture level (water content) of the different plants. If the moisture level is found to be below the desired level the moisture sensor sends the signal to the Arduino board which triggers the Water Pump² to turn ON and supply the water to the plant[2].In the previous system GSM is used but in our proposed system, we are using android application for monitoring the water level, temperature and humidity , moisture.

And also they included Cloud computing and IOT in this project. cloud computing is also known as on-demand computing, is a kind of Internet-based computing, where shared resources, data and information are provided to computers and other devices on-demand. It is a model for enabling ubiquitous on-demand access to a shared pool of configurable computing resources Cloud Computing is the use of hardware and software to deliver a service over a network (typically the Internet). With cloud computing, users can access files and use applications from any device that can access the Internet . The IOT needs standard protocols .For small devices MQTT and COAP are used. Both MQTT and COAP are open standards and are better suited to constrained environments than HTTP.MQTT gives flexibility in communication patterns and acts purely as a pipe for binary data. COAP is designed for interoperability with the web.

TOOLS USED/IMPLEMENTED:-

The Development Kit based on ESP8266, integrates GPIO, PWM, IIC, 1-Wire and ADC all in one board. Power your development in the fastest way combining with NodeMCU Firmware.

- USB-TTL included, plug& play
- 10 GPIO, every GPIO can be PWM, I2C, 1-wire
- FCC CERTIFIED WI-FI module
- PCB antenna
- 1 x Analog input (1.0V max)
- 9 x GPIO (3.3V logic), which can also be used for I2C or SPI 2 x UART pins
- 2 x 3-6V power inputs, reset, enable, LDO-disable, 3.3V output

RESULTS AND DISCUSSION:-

Thus the project creates an awareness about the automation in agricultural field. Here the manual intervention can be reduced by irrigating the plants automatically and the whole information about the agricultural field can be viewed in android application.

KNOWLEDGE AQUIRED:-

- Tools used to achieve it.
- How to maintain the tank if there is any excessive of heat.

IMPORTANT REFERENCE:-

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