Monitoring and Controlling the Crops in Warehouse using IOT

PES UNIVERSITY

Problem Statement

Our project aims to provide warehouse automation and security using sensors. These activities might include controlling warehouse temperature, humidity, and other systems, in order to provide the convenience, comfort and efficient usage of warehouse.

Background

We have learnt about using PIR Sensor to detect heat signals. And I got to know about ESP-32 which can be a great help to choose microcontroller.
We have learnt about different sensors, LDR sensor, Raspberry Pi, Relay, thingspeak.

Project Requirements

Requirements:

- Raspberry Pi
- Dht22
- PIR
- MQ135
- Fire
- Relay
- Fan
- Light

Design Approach

Constraints:

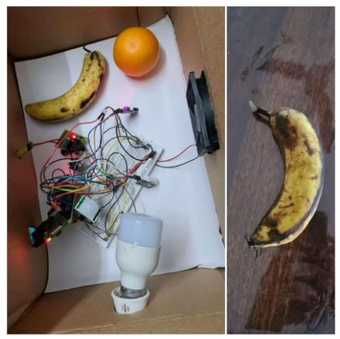
- Revenue and Affordability
- Power Supply

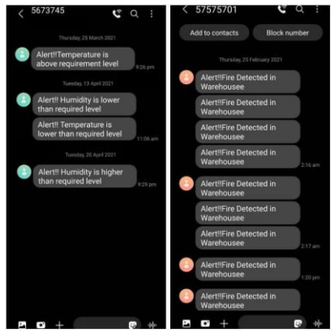
Assumptions:

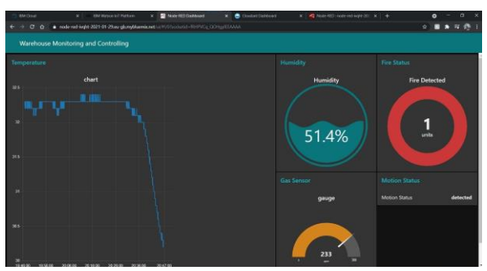
Keeping up reliable stock levels causes costs to remain stable, making it simpler for organizations to estimate creation, benefit and misfortune.

Results and Discussion

All the Data is collected and sent to the raspberry pi and its displaying in IBM Cloud, Cloudant, web page and sheets.







Summary of Project Outcome

Successfully increased the food availability.

Successfully created a project which helpful to the farmers, dealers, distributors etc...

Conclusions and Future Work

- There are no limitations on how many connections and sensors can be set up in an IOT smart warehouse system.
- The discussed model and IOT system design explored in this project can be implemented in a small setting like a storage house in the backyard and even on a large-scale warehouse.
- USSD functionality to implement an offline action control mechanism for warehouse management.
- Instead of light we can use heater for better results.

References

[1.]Kavya P, Pallavi K N, Shwetha M N, Swetha K, Mrs. Jayasri B S ,“Use of Smart Sensor &IoT to Monitor the Preservation of Food Grains at Warehouse”;2017,IJRTI

[2.]T. N. Anil Kumar, Bevinahal Lal swamy,Y. Raghavendra, S.G.Usharani, S. Usharani ,“Intelligent Food and Grain Storage Management System for the Warehouse and Cold Storage";2018;IJRESM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