SMART SCARECROW

MONALI DANGE[1], PRAGATI KARPE[2], SNEHAL JADHAV[3], CHHAYA THOSAR[4]

Department of Information Technology,
SVIT, Nashik-422003

***Abstract*: The project Smart Farming is an IOT based devices Project using the Mobile app which would turn the way of agriculture production by not only enhancing it but making it efficient, users friendly and safe. The aim/objective of this report is to proposed of project in the in the agricultural fields which will enable to save the crops from the birds, also getting live Data (Temperature, soil Moisture) for efficient environment monitoring which will enable them to increase their overall yield and quality of products and also handle the Agricultural Equipment (motor, sprinklers, sound making buzzers) through Mobile app by one click .The project is also integrated with ARDUINO Technology mixed with different sensors and node MCU module producing live Data on users Mobile screen. The product would give High Accuracy over 93% in data Feeds.**

***Keywords*: Smart Scarecrow, Cloud Computing, Temperature, Mobile App, ARDUINO, IOT, MCU.**

INTRODUCTION

Monitoring systems are used in the field to collect the information on farming conditions (e.g., light intensity, humidity, and Temperature) with the aim of enhancing crop productivity. Internet of things (IOT) technology is a recent trend in Numerous fields. Including monitoring system for agricultural farming, farmers need manual labor to handle crops and livestock, obtain leading to inefficient resource use .the down side can be addressed through the concept of Smart farming whereby farmers receive training in the use of IOT, access to the global positioning system (GPS) and data management capabilities to increase the quantity and quality of their products. The current project integrates the advance system. To offer a tool rooted in smart agriculture.

AIM AND OBJECTIVES:

1. Remote monitoring of farm conditions and infrastructure saving labor on routine farm checks.
2. Improving producer's decision making through data analytics
3. Faster and quicker Insight from real -time helping farmer respond to what the market wants.
4. Inefficiency in how we produce food to insure less wastage expediency to Market, and enhanced traceability to demonstrate and suspend able food to our costumer.
5. Building the capability to respond to new and emerging technologies and investing in research and development to contribute to ongoing innovation and improved productivity.

MOTIVATION:

Traditional farming has been, is, and will continue in the future to be a manual and labor-intensive industry. … To address these challenges, efforts and research are in place to improve the quality and quantity of agriculture products by making them 'connected' and 'intelligent' through "smart farming". Farmers being confronted with a labor shortage, more stringent legislation, increasing global population and the declining numbers of farmers, forces them to look to new solutions. With technologies such as the Internet of Things (IOT), Big data & Analytics, Artificial Intelligence (AI) And Machine Learning (ML) entering almost all industries. By monitoring the eating habits of your livestock and thus giving your livestock higher quality food and more optimal times you can reduce the amount of CO2 emissions. By implementing all of these things you can make a great effort towards Climate-smart agriculture. A form of sustainable smart farming

LITRATURE SURVEY

IOT Based Smart Agriculture

Author: PROF.N.GONDACHWAR, DR.R.S.KAWITKAR,

Electronics and Telecommunication, college of engineering Pune. Findings:

The sensors and microcontroller of three nodes are successful interfaced with raspberry Pi and wireless communication is achieved between various nodes. All observations and experimental test proves that project is a complete solution to field activities, Irrigation problems and storage problem using remote control smart robot irrigation system and smart warehouse management system respectively. Implementation of such system in field can definitely help to improve the crops and overall productions.

IOT Based Smart Crop Monitoring in Farm Land

Author: N.GOWTHAMAN, V.NANDINI, S.MITHRA, N.PRIYA– Assistant professor, Department of ECE, SNS college of Technology, Coimbatore.

TN- INDIA- UG Student Department - ECE, SNS college of Technology TN-INDIA. Findings:

In this paper we purposed a method for efficient crop monitoring for agriculture field. With the application for IOT the data can be stored and retrieved from anywhere in this purposed work, the sensor part is limited only for monitoring Crops

SCOPE:

When things like household appliances are connected to a network, they can work together in cooperation to provide the ideal service as a whole, not as a collection of independently working devices. This is useful for many of the real-world applications and services, and one would for example apply it to build a smart residence.

PROBLEM STATEMENT:

The agricultural farming is done by using human eye's where farm are protected by (dummy person) which is made of grass pot as a inspectors however, the accuracy of human infection is unstable due to fatigue, and it's more challenging for human eyes to detect brides attack on the crops. To avoid person usually use the anonymous or rope to protect Crops. Therefore, automated inspection becomes a popular way for substituting human inspection as machines are good at repeating a same task without fatigue until now most automated crop inspector machine are realize by using visual inspection systems.

DRAWBACKS OF EXISTING SYSTEM

- **Less User Friendly:** The existing system is not user friendly because the retrieval of day-to-day activities data/records is very slow and records are not maintained efficiently and effectively.
- **Complex for generating the report:** We require more calculations and efforts to generate the report so it is generated at the end of the session. And the student does not get a chance to improve their attendance.
- **Lengthy time:** Every work is done manually so we cannot generate report in the middle of the session or as per the requirement because it is very time consuming.

SYSTEM ARCHITECTURE

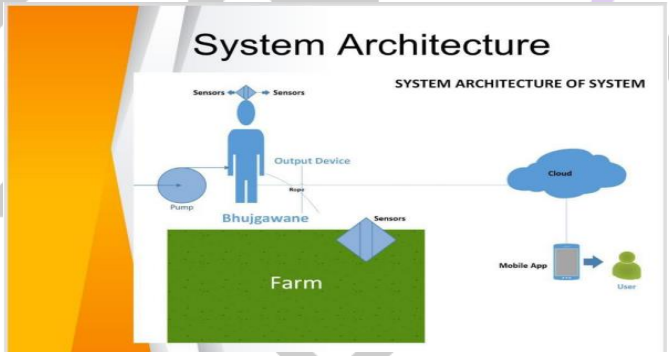

Fig -1: System Architecture Diagram

The proposed model focuses on predicting the credibility of customers for loan repayment by analyzing their behavior. The input to the model is the customer behavior collected. Based on the output from the classifier, decision on whether to approve or reject the customer request can be made. Decision Tree Induction data mining technique is used to generate the relevant attributes and also make the decision in the model. Data mining model of the proposed system is as depicted in figure

System Modules

1. Data Collection
2. Data Pre-processing
3. Feature Engineering
4. Imputation
5. Handling Outliers
6. Binning / Categorization
7. Results

ADVANTAGES

1. Innovative.
3. Centralised Database.
4. Easy to use.
5. Efficient cost.

APPLICATION:

1. Education.
2. Research.
3. Organizations**.**

METHODOLOGY

Methodology Design system takes two major parts by hardware module and software module, the hardware module is designed by schematic diagram, the software module is developed using C-language, in case of gas leakage. The gas sensor will detect the gas leakage and will then make the sensor output have a certain voltage value (analog voltage) . When the output voltage of the curtain has exceeded the specified limit value (settings) then this condition will microcontroller automatically activated the Buzzer to sounding to mark the people closest to the place is accompanied by an alert on the LCD screen of the device. This paper will discuss how the MQ-6 gas sensor using the node MCU microcontroller is used for the detection of LPG gas leakage. Power supply is a device used to supply power to all chips and components of the system, the supply is regulated for constant +5 volt DC the ARDUINO Uno microcontroller based system requires a power supply with a maximum current of 1A. On the ARDUINO board itself voltage will be changed to + 5V voltage. The MQ-6 gas sensor is a sensor that has a fast response to leakage gas LPG (liquid petroleum gas) and can be used in a simple set of drives, MQ-6 sensors commonly used in equipment detecting gas leaks in household and industrial activities Buzzer is a device that can emit a loud noise when active. Generally, buzzers are used to give signals to indicate certain conditions. In this experiment, Buzzer is used to indicate the condition of the detector that has detected an LPG leak that on this circuit, the buzzer will sound if there is a gas leak LED is a display of the text of leakage gas

5. CONCLUSION

These days food demand is increased due the population, so the way of farming is very important to reach the demand of public. Focus on smarter and efficient way of cultivation is crucial. The improvement of new practices of increasing crops yield and handling, recently youth are inclining towards agriculture and choosing it as profession. Technology like IOT helps them to simplified way of cultivation and monitoring crops by accessing the information using mobiles and internet. Taking these factors into consideration, this paper highlights the major role of technologies, mainly IOT, which makes the farming smarter to meet the expectations in future. We use sensors, cloud Mobile app, buzzers and other devices as discussed earlier. Various farming methods and how effective they work

REFERENCES

1. Gondchawar.N and Dr.R.S.kawitkar, 2016, IOT Based Smart agriculture. International journal of advanced research in computer and communication engineering, 5(6).
2. A.Nayyer and V.Puri. 2016, smart farming: IOT Based Smart Sensors agriculture sticks for live Temperature and moisture monitoring using ARDUINO Technology, cloud computing & solar technology.
3. IOT in agriculture 5 technology use cases for smart farming.
4. htttp://WWW.geeksforgeeks.org/crop-monitoring-smart - farming -using -IOT.
5. M.C.Dwarkani, R.Ram, S.Jagannathan, R.priyatharshini.” Smart agriculture system using sensors for agriculture task automation”, 2015 IEEE international conference on technological Innovation in ICT for agriculture and rural development (TIAR 2015).
6.S.Suakanto,ventije.J,.L.Engel,M.Hutagalung,D.Angela,” sensors networks data acquisition and task management for decision support of smart agriculture”,2016 international conference on information technology systems and innovation (ICITSI)Bandung – Bali ,pp.24-27,Oct .2016.