Abstract

The Agricultural productivity in our country does not meet the required output due to the problems like entering of the animals in the farm and unawareness of the moisture level of the farm with the integration of local weather monitoring system. The objective of the project is to protect the plants from threatening animals and to provide the continuous monitoring of the plants. We can integrate IOT with Digital Image processing and wireless sensor network. Existing systems use LASER network that cannot isolate the animal interference from human interference. The Proposed System aims at using motion sensors so that it will continuously monitor the output. If some motion is observed in the farm then the webcam is activated and it captures the image. The captured image is compared with the saved image sheet and then it was verified whether the image is of the human or animal. If animal is sensed then the buzzer is on with the message from the GSM module to the owner and email is sent. Moisture level is sensed and then the output is monitored. If the deficiency in water is sensed and then the data from the weather department was analyzed. If there is a possibility of rain during the next 4-5 hours of the operation then the motor for pumping is stopped or else the pump was started and
then the irrigation system works. Water flow can also be controlled via the analog input of the soil moisture level. If there is urgent requirement of the irrigation system a reminder via mail is sent to the user for immediate turning on of the dc motor irrigation system remotely via user. A separate website is provided to the user to manually start the irrigation system via the webpage. All the components are interfaced to the Raspberry pi.

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Index Terms

Computer Science Information Sciences

Keywords

Raspberry pi, Image processing (Pi-Cam), IOT, Sensors (Motion/Proximity, Moisture).