LITERATURE SURVEY

TEAM LEAD : 810419104105

TEAM MEMBER 1 : 810419104066

TEAM MEMBER 2 : 810419104089

TEAM MEMBER 3 : 810419104121

TEAM MEMBER 4 : 810419104086

ABSTRACT

The device will detect the animals and birds using the Clarifai service. If any animal or bird is detected the image will be captured and stored in the IBM Cloud object storage. It also generates an alarm and avoid animals from destroying the crop. The image URL will be stored in the IBM Cloudant DB service The device will also monitor the soil moisture levels, temperature, and humidity values and send them to the IBM IoT Platform .The image will be retrieved from Object storage and displayed in the web application .A web application is developed to visualize the soil moisture, temperature, and humidity values Users can also control the motors through web applications. Create and configure IBM Cloud Services, IBM Watson IoT Platform, IBM IoT Platform, Node-RED service, Cloudant DB to store location data, loud object storage service and create a bucket to store the images, Develop a python script to publish the sensor parameters like Temperature, Humidity, and Soil Moisture to the IBM IoT platform and detect the animals and birds in video streaming using Clarifai. Display the image in the Node-RED web UI and also display the temperature, humidity, and soil moisture levels. Integrate the buttons in the UI to control the Motors.

Keywords: Node-RED, Raspberry Pi 3B+ ,ESP32,IBM Watson IoT Platform, IBM IoT Platform, soil moisture sensor, temperature, and humidity sensor, Clarifai service.

LITERATURE SURVEY

APPLICATION OF IOT AND MACHINE LEARNING IN CROP PROTECTION AGAINST ANIMAL INTRUSION

K Balakrishna∗, Fazil Mohammed, C.R. Ullas, C.M. Hema, S.K. Sonakshi Dept. of ECE, Maharaja Institute of Technology Mysore, Karnataka, India.(2021)

Animal intrusion is a major threat to the productivity of the crops, which affects food security and reduces the profit to the farmers. This proposed model presents the development of the Internet of Things and Machine learning technique-based solutions to overcome this

problem. Raspberry Pi runs the machine algorithm, which is interfaced with the ESP8266 Wireless Fidelity module, Pi Camera, Buzzer, and LED. Machine learning algorithms like Region-based Convolutional Neural Network and Single Shot Detection technology plays an important role to detect the object in the images and classify the animals. The experimentation reveals that the Single Shot Detection algorithm outperforms than Region-based Convolutional Neural Network algorithm. Finally, the Twilio API interfaced software decimates the information to the farmers to take decisive action in their farm field.

EXISTING SYSTEM

1. prediction for the algorithm, SSD outstands in predicting and classifying the animals compared to R-CNN, and also computation time will be very less. But it is difficult to developers.
2. Lack of security issues in this model. So attacker penetrate into this system through internet protocol address.

PROPOSED SYSTEM

1. Low power consumption (5V) is enough to run this model and easy to control or monitor using NODE-RED service.
2. Cloud storage is use this model so, Information are preventing from attackers
3. Clarifai service used to detect animals and birds so crops are preventing from animals and birds.