

A

PROJECT REPORT ON

“SMART AGRICULTURE SYSTEM BASED ON IOT”

SUBMITTED TO SMARTINTERNZ
FOR PARTIAL FULFILLMENT
OF INTERSHIP OUTCOME
BY

AKASH BHORKADE
(SBID: SB20200047819)



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ABSTRACT

In olden Days Farmers used to figure the ripeness of soil and influenced suspicions to develop which to kind of yield. They didn't think about the humidity, level of water and especially climate condition which terrible a farmer increasingly The Internet of things (IOT) is remodeling the agribusiness empowering the agriculturists through the extensive range of strategies, for example, accuracy as well as practical farming to deal with challenges in the field. IOT modernization helps in assembly information on circumstances like climate, dampness, temperature and fruitfulness of soil, Crop web based examination empowers discovery of wild plant, level of water, bug location, creature interruption in to the field, trim development, horticulture. IOT utilize farmers to get related with his residence from wherever and at whatever point. Remote sensor structures are utilized for watching the homestead conditions and tinier scale controllers are utilized to control and mechanize the home shapes. To see remotely the conditions as picture and video, remote cameras have been used. IOT development can diminish the cost and update the productivity of standard developing.

Keywords: Soil moisture sensor, Water level sensor, Humidity sensor, Temperature sensor, IOT

INTRODUCTION

- Smart Agriculture System based on IoT can monitor soil moisture and climatic conditions to grow and yield a good crop.
- The farmer can also get the real time weather forecasting data by using external platforms like Open Weather API.
- Farmer is provided a mobile app using which he can monitor the temperature, humidity and soil moisture parameters along with weather forecasting details.
- Based on all the parameters he can water his crop by controlling the motors using the mobile application.
- Even if the farmer is not present near his crop he can water his crop by controlling the motors using the mobile application from anywhere.
- Here we are using the Online IoT simulator for getting the Temperature, Humidity and Soil Moisture values.



WORKING

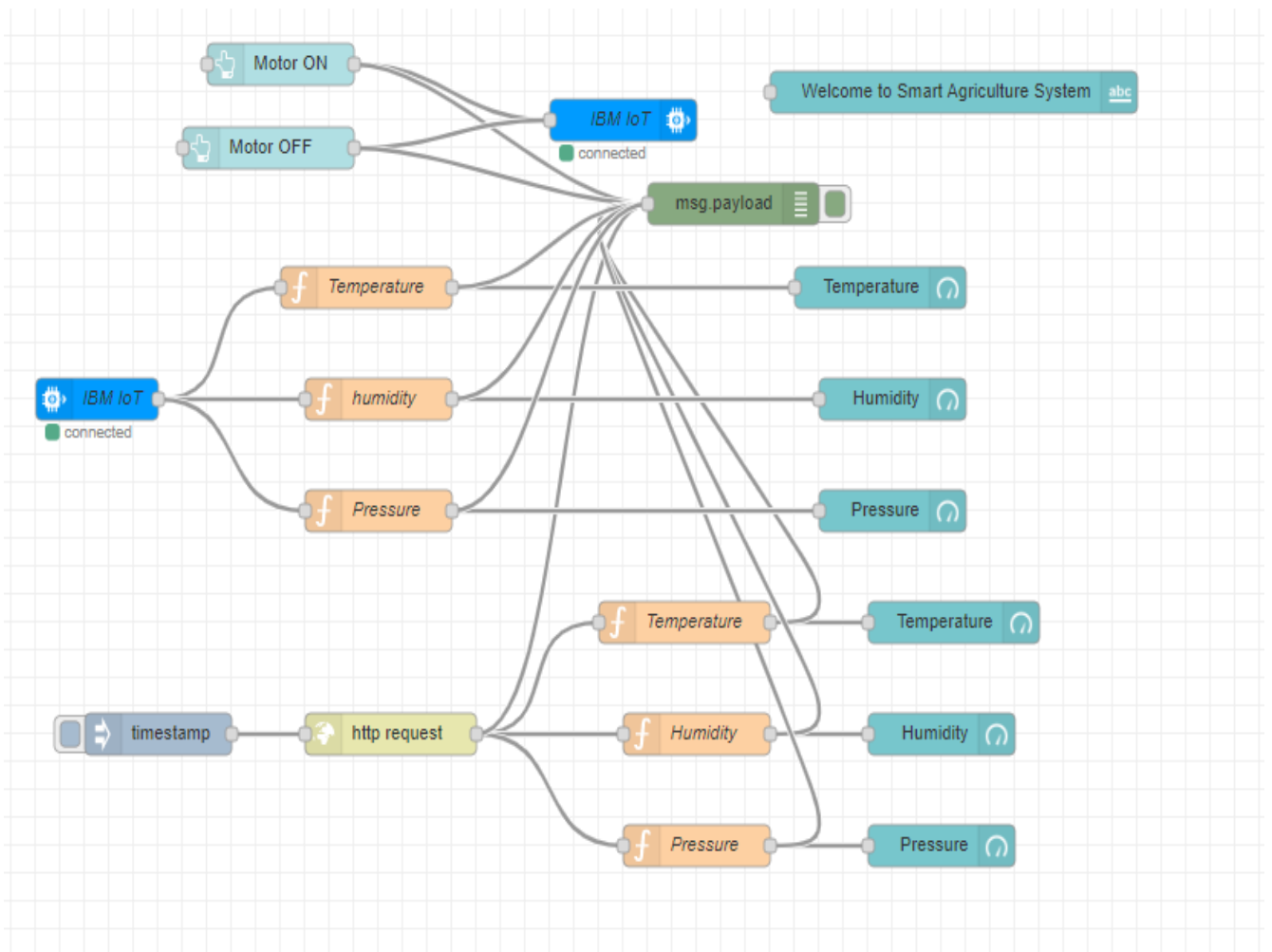
To improve the efficiency of the product there by supporting both rancher and country we need to utilize the innovation which appraises the nature of harvest and giving recommendations. The Internet of things (IoT) is revamping the Agribusiness engaging the farmers by the broad assortment of techniques, for instance, accuracy and conservative cultivation to go up against challenges in the field.

The above system consist of IBM Watson IOT platform, IOT simulator (IOT sensor), Node-Red, Node-red UI Dashboard to show final output. The IBM platform is the heart of the system through which we can operate the whole system. The IBM Watson platform receives the input from the online IOT simulator. Then the received data is given to the Node-red. After parsing all the node, we will get the output from the debug node on the debug bar. Then after receiving that data on debug bar, we have to display it on node-red dashboard. The node-red UI dashboard will

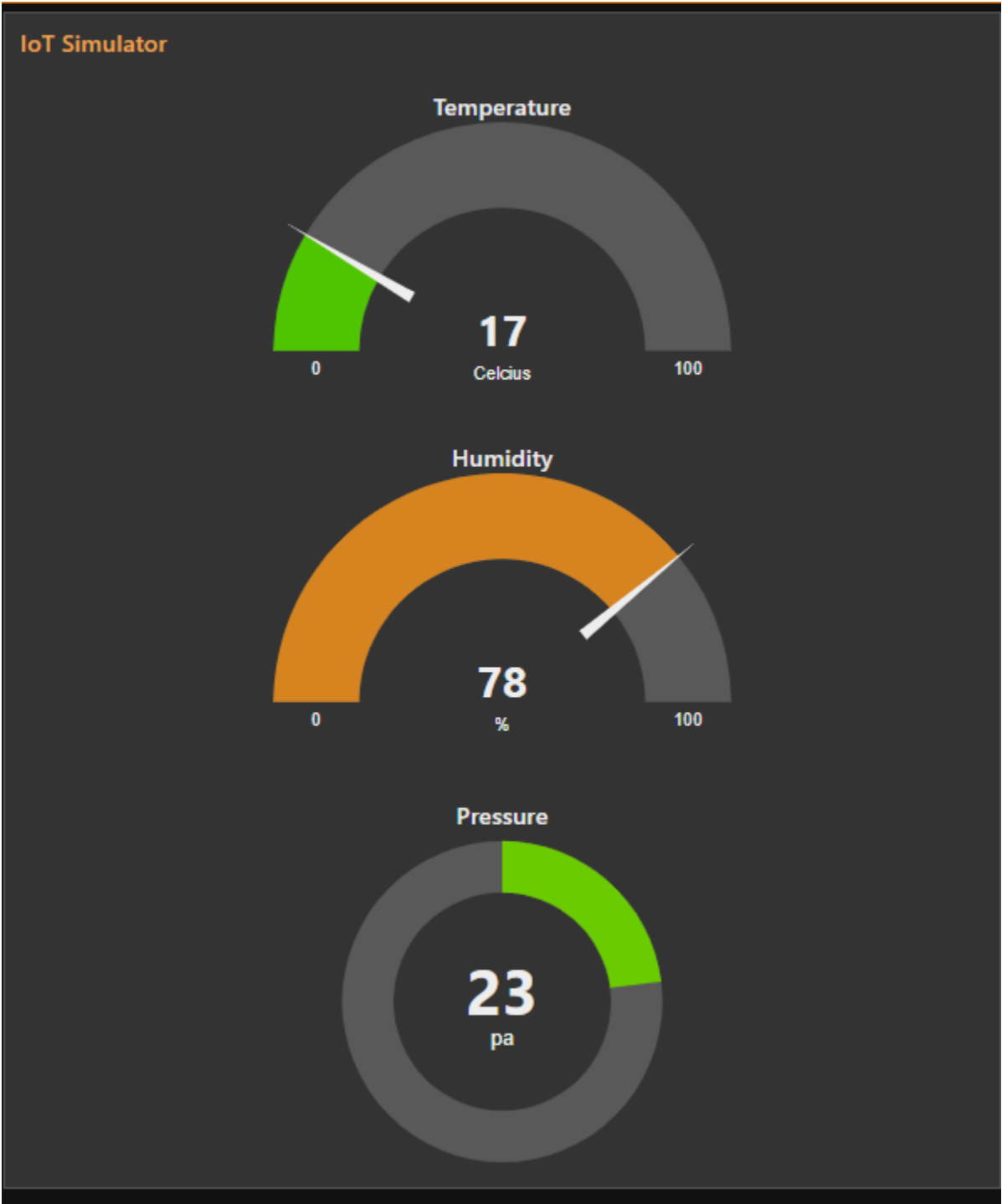
show the output as shown in the afterward slide.

We have various node used from node-red in our project which are inject node, function node, http request node, gauge node and debug node.

NODE FLOW

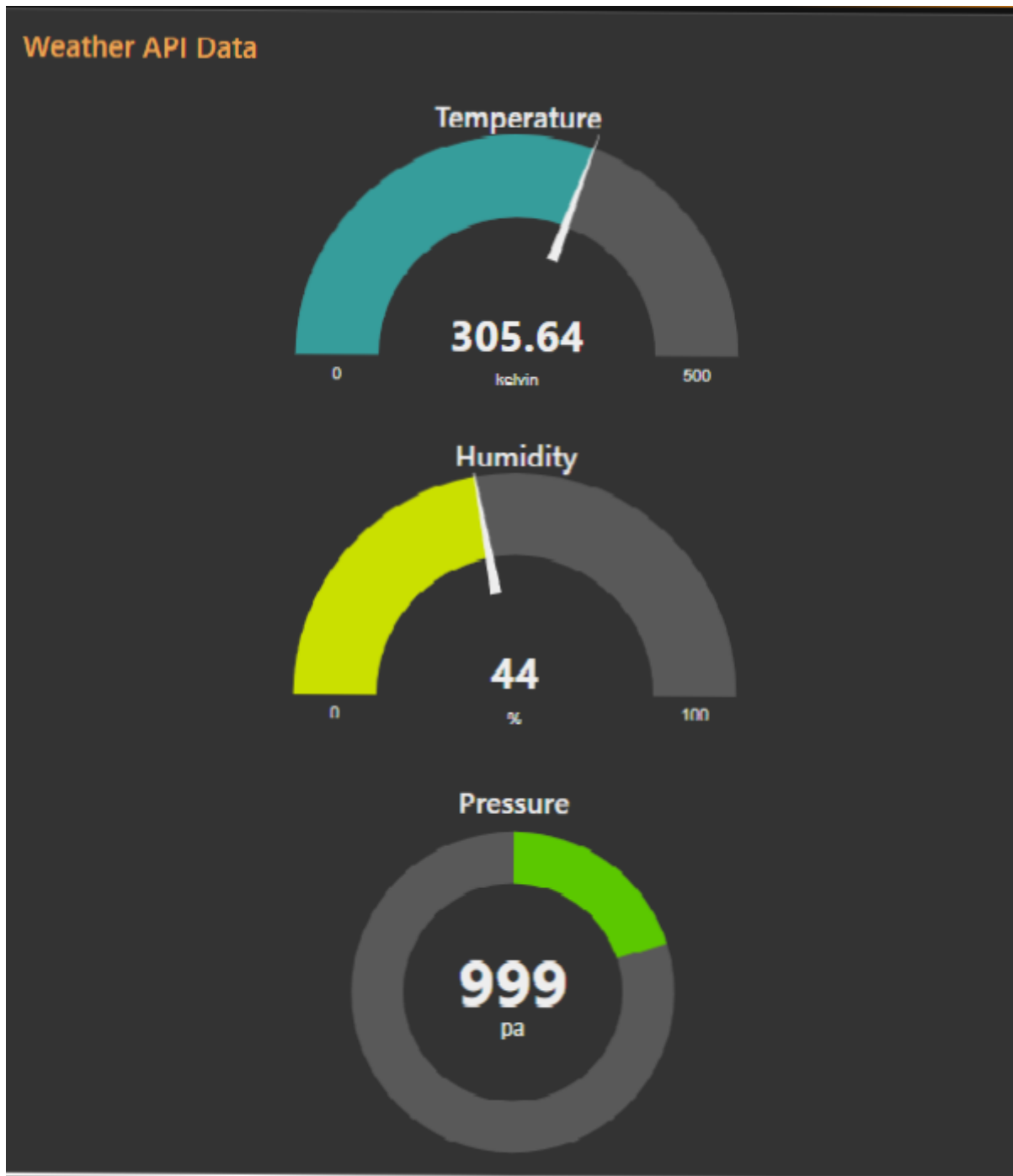


IOT SIMULATOR OUTPUT



WEATHER API OUTPUT

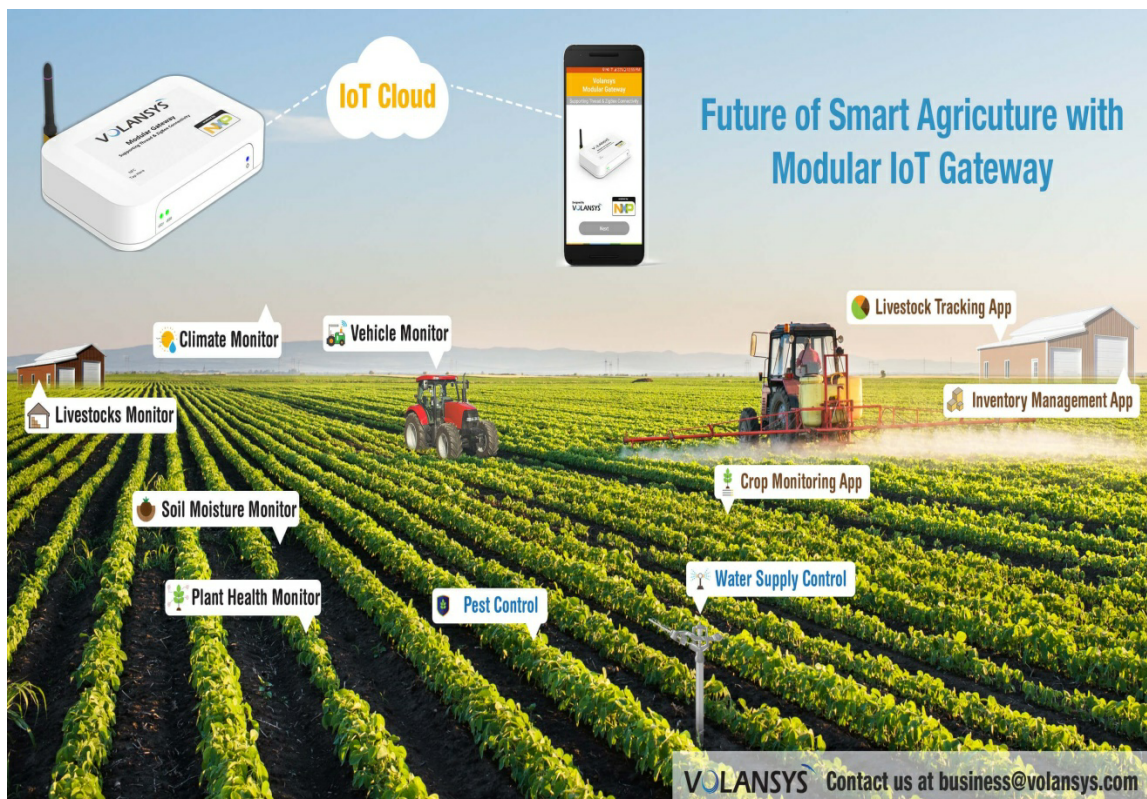
Amravati, Maharashtra



OUTCOME

Even if the farmer is not present near his crop he can water his crop by controlling the motors using the mobile application from anywhere.

The yield appeared beneath signifies the temperature, soil dampness state and humidity present in the soil. The next outcome is the yield as of Android purpose that is produced in the cell phone. It decides the temperature, stickiness and dampness.



CONCLUSION

The points of interest like water sparing and work sparing are started utilizing sensors that work consequently as they are modified.

This idea of modernization of farming is straightforward, reasonable and operable.

As relying upon these parameter esteems rancher can without much of a stretch choose which fungicides and pesticides are utilized for enhancing crop creation