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Automatic Poultry Feeding System

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Abstract—The IoT-based Intelligent Poultry Farm provides a smooth and better viewing experience for the poultry farming user. This system uses the sensors and the microcontroller unit to perform these operations of feeding, water supply and observation of temperature and humidity, which are the main causes of any type of poultry epidemic or disease. The introduction of IoT into the system will be beneficial for facilitating the operation and observation of data in real time via the internet for the user.
Keywords-- Humidity, Internet, Internet of Things (IoT), Microcontroller Unit, Poultry Farm, Sensors, Temperature

I. INTRODUCTION

Poultry farming in India has grown enormously in recent years or decades. The country mainly contributes to the export of poultry products. As a result, awareness of bird health and product quality has also increased. Poultry care causes many problems, because it is a very boring and complex task that requires a great deal of vigilance and a minimum of errors. These sensitive creatures are susceptible to many diseases that can be an obstacle to the business. Moreover, the work required to do the work is time-consuming and expensive. The introduction of automation in the poultry industry has led to huge changes in compliance and the need to stay up to date with the recent situation of the farm. This technology, which required a large workforce to meet the constant needs of the birds, reduced manual labor and made it easier for employees and owners. The IoT made the operation of the farm easy and very active. With this technology, the subject of the data can obtain data in real time via the cloud at any time and use it to make the necessary changes in the current circumstances.

In this article we present a water supply control system and a real-time temperature and humidity detector. It uses the 8266 MCU ESP node used as a Wi-Fi connector, power switch relay, L293D power controller motor, DHT22 sensor to detect temperature and humidity values. This is an economical and effective solution designed to help the user take good care of poultry.

II. LITERATURE SURVEY

Chakchai So-In, Sarayut Poolsanguan and Kanokmon Rujirakul [1] have developed the global architecture of hybrid systems for mobile and wireless network management systems for intelligent poultry sensors. One of the ideas is to distinguish the electronic and mechanical parts of the farm in terms of mobility and flexibility. Take into account EVAP systems in general once. Managers and farmers have established farms, in addition to the selection of food and animal heritage, other important factors such as temperature, humidity, light and population density are also necessary for the controller can adjust the environmental conditions correctly.

In Hironao Okada, Koutarou Suzuki, Tsukamoto Kenji in Toshihiro Itoh [2] is explicitly explained by the bird flu virus in skin cancer, but also by the behavior of the sensor. List puts the strain in the field or use of body temperature in lifetime acceleration data. Surveillance data detected on unusual media, automatically reported by users of internet services, as well as historical information, terms and conditions of sale accepted by the media, sensitive individuals.

Chicken growth will decrease if the presence of dust and ammonia in the air is excessive. To avoid a low growth rate, moisture should be kept below 50% if the temperature is above 27 degrees.

E. L. Nichols [3] addresses the following important questions: for growth to be effective, moisture must be controlled. Moisture describes the amount of heat and ammonia to which birds are exposed. Moisture is directly proactive for dust and ammonia in the home. When the temperature is between 15 and 17 degrees, the humidity should be between 50 and 70 degrees.

H. Okada [1], H. Nogami [1], T. Kobayashi, T. Masuda and T. Itoh [4] have been developed with a wireless sensor button with very low power to continuously monitor the activity of animal health care. The interrupted effect of measuring body temperature is sufficient for health care and effective to reduce energy consumption. However, in the measurement of activity, intermittent action is not adequate because the change in activity is rapid. This report demonstrates that a highly efficient method in the use of energy to measure continuous activity with a custom LSI developed works with approximately 320 nW of calculated power consumption in standby mode and a piezoelectric false door-to-door MEMS. They also show the knot applied to a chicken health surveillance system for the surveillance of avian influenza in poultry farms.

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III. SYSTEM ARCHITECTURE

A. Block Diagram

The System is divided into Control and Observation sections. The control section consists of a Node MCU ESP8266 unit, Relay Module, L293D Motor Driver IC,The Observation section consists of a Temperature and Humidity Sensor DHT22, Cloud from UbiDots for data display.

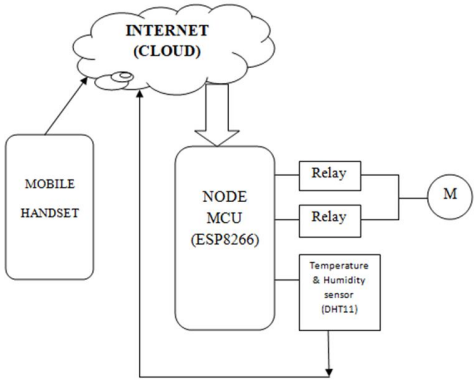

Fig. 1: Block Diagram of Automatic Poultry Feeding System

IV. CONCLUSION

The monitoring of real-time conditions is the necessity for poultry farming. This is necessary because it has a major impact on both the birds and the generated products. Such a method is defined in this work. It offers a solution for feeding and feeding birds without manual / manual operation. In addition, remote control of the temperature and humidity in the garden is useful for making the necessary changes to the environment of the bird.

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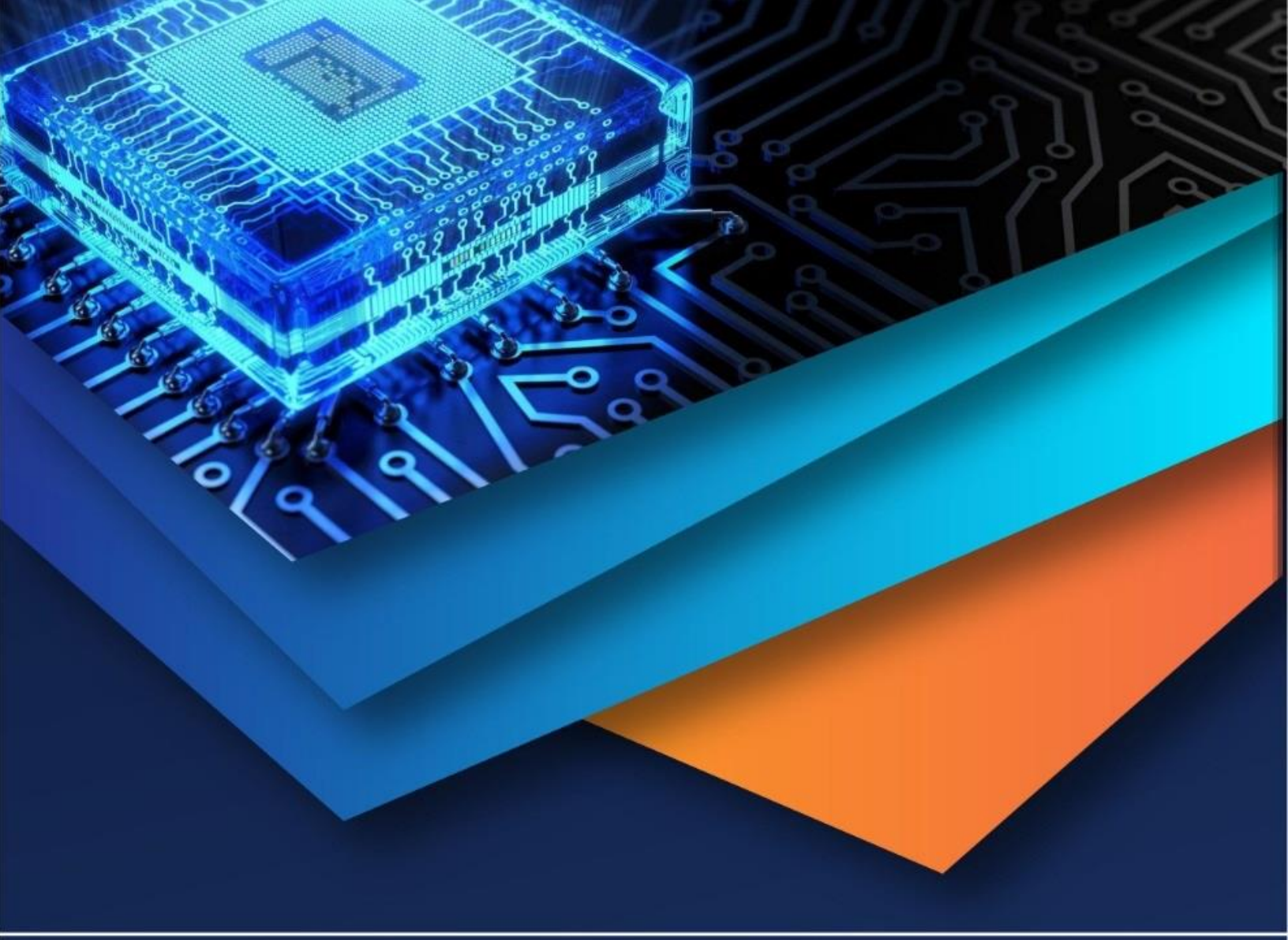

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