

A STEP TOWARDS SMART AGRICULTURE SYSTEM

Mohammed Ridha H .Alhakeem

Ministry of Oil, Midland Refineries company, Baghdad, Iraq

Email: mu_1978@yahoo.com

ABSTRACT

Iraq is built on agriculture. As a result of population growth, accidents, and contamination, India's agriculture sector is currently declining in quality. Therefore, despite the speed and accuracy of the work, we have attempted to simplify the agriculture industry and restrict human involvement. In order to make this a reality, we are using IOT as the regulator and a few sensors that are connected to it. A rancher must occasionally screen the field for a respectable yield. This paper focuses on crop observation using IoT devices that would provide ranchers with real-time field data. Once obtained, the information is evaluated and documented for further use. This task was assigned to increase harvest efficiency and take preventive action against production loss. Additionally, we included a coordinated structure for waste administration. By enabling brilliant activity that is satisfying and independent, the Internet of Things (IOT) has been playing an awesome role in simplifying human lives. Comparing the suggested framework to the current garbage assortment framework, the movement distance is reduced by 30% on average in the approved circumstance. By enabling continuous observation and an optimized route, it reduces the cost of fuel and human labor, upgrading and improving the system.

KEYWORDS

Agriculture, quality, IOT



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INTRODUCTION

In our country, common development practices are still in use today (Oak, Du, Yan, Takawale, & Amit, 2019), (Oak et al., 2019), (Oak, 2016), (Oak, 2019). In addition to this enormous personalized control, important tasks are carried out. Because farming is such a significant industry, most rancher families tend to choose last-resort occupations. The expense of an exit strategy is managed with precision by exercising self-control. Exactness horticulture (PA) is a farming method that makes use of modern data tools to ensure that the harvests and soil are delivered in the most beneficial manner possible for growth and development. IOT is best described as the systems management of physical objects using embedded electronic sensors and software that enables these devices to communicate with one another. By connecting actual devices to the web, the IOT conducts detecting, gathering information, storing the information, and preparing. In this essay, we'll develop a framework for periodically gathering trash; if it turns out to be unrealistic, we'll attach one system to it for the purpose of squeezing. Because of the gadget, the trash can hold enough for an additional two days (Oak, 2018), (Jhala, Oak, & Khare, 2018), (Jain, Oak, & Bansal, 2019), (Khare & Oak, 2020), (Schwag, Oak, Chiang, & Mittal, 2020). Waste of executives is primarily handled by metropolitan boards of trustees in urban areas of India. We use ultrasonic sensors to detect the level of rubbish in the dustbins when the trash cans are full

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outside of this area. The sensors will be placed on the container's highest point to help relay information to the city advisory group that the level of trash has reached its peak point. The trashcan should then begin to fill as soon as time permits (Jain et al., 2019), (Al-Bahrani & Cree, 2018), (Al-Bahrani, Aljuboury, & Cree, 2018), (Al - Bahrani, Graham - Jones, Gombos, Al - Ani, & Cree, 2020), (Al-Bahrani, Gombos, & Cree, 2019).

RESEARCH METHOD

The research method used in this study is a qualitative descriptive method. The type of data used in this study is qualitative data, which is categorized into two types, namely primary data and secondary data. Sources of data obtained through library research techniques (library study) which refers to sources available both online and offline such as: scientific journals, books and news sourced from trusted sources. These sources are collected based on discussion and discussion from one information to another. Data collection techniques used in this study were observation, interviews and research. This data is analyzed and then conclusions are drawn.

RESULTS AND DISCUSSION

The purpose of this project is to configure, design, and implement a mechanized trash-checking framework using sensor and web of things technology. Such an IOT-based garbage checking framework does not exist. The conventional setup would collect trash from every container, whether or not it was full. The suggested route framework reduces overall travel distance, which reduces labour requirements and fuel expenditure. This system inspects the garbage can and informs the level about trash can assortment and the amount of trash inside the trash can. To determine the trash level and compare it to the trash depth, the system uses ultrasonic sensors placed over the containers. If the trash level is 90% or less, then everything is fine. However, their ARDUINO provides information above container level to the worker if the trash level is beyond 90%. Information is stored on a server, which also displays the level of each trash can on the page. Information regarding a specific container's trash level and area is included in an instant message. Air contamination was determined via a gas sensor and light sensor, respectively. Warmth from the air is picked up by the temperature sensor. The cloud worker receives the sensor data from the containers. For a successful garbage collection framework, the sent information can be broken down and addressed in the most effective way. The signal for street light activation came from the website page. Such a high sign when the sign is low, it denotes that the streetlight is off. When the garbage canister is full, the alert unit will be close by(Al-Bahrani & Cree, 2018), (Al-Bahrani & Cree, 2019), (Verma, Moghaddam, & Anwar, 2022), (Oak et al., 2019) (Oak, 2016), (Oak, 2021).

Fewer present frameworks than there were ten years ago are striving to reduce the amount of water used by agriculture, but these frameworks have some limitations. Due to the fact that these frameworks handle watering without analysing the features of the soil, they administer water to the soil in an uneven manner, which reduces yields. Similar to frameworks, human intervention was more time-consuming. Therefore, we need modern innovation to identify this problem and support better water systems for the CEOs.

CONCLUSION

Internet of Things (IOT)-based framework for ranch horticulture computerization is suggested. In order for the customer to control and monitor the framework remotely, the framework provides a web interface. This study examines prior overview studies and proposes a fresh farming administration paradigm while outlining IOT developments and applications related to horticulture. Our main goal in this endeavor is to cultivate in a way that takes use of new developments in order to increase the development of harvests and their water supply. Ranchers can therefore benefit from this robotized system because they can surely access and manage it remotely using their mobile phones. Additionally, the system reduces human intervention, saves time, improves resource usage, and increases poultry production.

REFERENCES

- Al-Bahrani, Mohammed, Aljuboury, Muhsin, & Cree, Alistair. (2018). Damage sensing and mechanical properties of laminate composite based MWCNTs under anticlastic test. *Materials Research Express*, 6(3), 35704.
- Al-Bahrani, Mohammed, & Cree, Alistair. (2018). *Predicting the mechanical behavior of epoxy*

resin based carbon nanotubes.

- Al-Bahrani, Mohammed, & Cree, Alistair. (2019). A simple criterion to evaluate the degree of damage in composite materials after sudden impact loads by exploiting the MWCNTs piezoresistive property. *Carbon*, 150, 505–517.
- Al-Bahrani, Mohammed, Gombos, Zoltan J., & Cree, Alistair. (2019). Investigation of the constancy of the MWCNTs on the fibres surface for manufactured self-sensing composites. *Composites Part B: Engineering*, 173, 106998.
- Al-Bahrani, Mohammed, Graham-Jones, Jasper, Gombos, Zoltan, Al-Ani, Aqeel, & Cree, Alistair. (2020). High-efficient multifunctional self-heating nanocomposite-based MWCNTs for energy applications. *International Journal of Energy Research*, 44(2), 1113–1124.
- Jain, Harsh, Oak, Rajvardhan, & Bansal, Jay. (2019). Towards Developing a Secure and Robust Solution for E-Voting using Blockchain. *2019 International Conference on Nascent Technologies in Engineering (ICNTE)*, 1–6. IEEE.
- Jhala, Karanveer Singh, Oak, Rajvardhan, & Khare, Mrunmayee. (2018). Smart collaboration mechanism using blockchain technology. *2018 5th IEEE International Conference on Cyber Security and Cloud Computing (CSCloud)/2018 4th IEEE International Conference on Edge Computing and Scalable Cloud (EdgeCom)*, 117–121. IEEE.
- Khare, Mrunmayee, & Oak, Rajvardhan. (2020). Real-Time distributed denial-of-service (DDoS) attack detection using decision trees for server performance maintenance. In *Performance Management of Integrated Systems and its Applications in Software Engineering* (pp. 1–9). Springer.
- Oak, Rajvardhan. (2016). Extractive techniques for automatic document summarization: a survey. *International Journal of Innovative Research in Computer and Communication Engineering*, 4(3), 4158–4164.
- Oak, Rajvardhan. (2018). A literature survey on authentication using Behavioural biometric techniques. *Intelligent Computing and Information and Communication*, 173–181.
- Oak, Rajvardhan. (2019). Poster: Adversarial Examples for Hate Speech Classifiers. *Proceedings of the 2019 ACM SIGSAC Conference on Computer and Communications Security*, 2621–2623.
- Oak, Rajvardhan. (2021). The Fault in the Stars: Understanding the Underground Market of Amazon Reviews. *ArXiv Preprint ArXiv:2102.04217*.
- Oak, Rajvardhan, Du, Min, Yan, David, Takawale, Harshvardhan, & Amit, Idan. (2019). Malware detection on highly imbalanced data through sequence modeling. *Proceedings of the 12th ACM Workshop on Artificial Intelligence and Security*, 37–48.
- Sehwag, Vikash, Oak, Rajvardhan, Chiang, Mung, & Mittal, Prateek. (2020). Time for a background check! uncovering the impact of background features on deep neural networks. *ArXiv Preprint ArXiv:2006.14077*.
- Verma, Akriti, Moghaddam, Valeh, & Anwar, Adnan. (2022). Data-driven behavioural biometrics for continuous and adaptive user verification using Smartphone and Smartwatch. *Sustainability*, 14(12), 7362.