

“BLUETOOTH CONTROL PESTICIDE SPRINKLE ROBOT”

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Abstract- India is the farmland with a population of three-fourths in agriculture. In accordance with the climate and other resources accessible to them, farmers will grow multiple plants in their field. But some technical abilities along with technological assistance are required to achieve high output and excellent quality. The management of food crops includes very close surveillance, particularly with regard to the treatment of illnesses, which will cause severe effects after harvest. Disease is recognized in crops as the shift or deficiency of the plants ordinary functions that will generate certain symptoms. The disease that causes agents in plants is mainly defined as any agent's pathogens. Most of these pathogenic agents signs are seen in the leaves, stems and branches of the crops. Consequently, the diagnosis of disease and the proportion of disease produced in crops is compulsory for effective and successful plant cultivation. This can be done through taking input images using camera, analyzing them using machine learning process. This displays the disease presented on the leaf, stem or plant. This also displays the exposed area to disease and also predicts the remedies, turn on the pesticide sprayer which sprays the respective pesticide on the exposed area to disease. This is very necessary for effective spraying of the pesticide. The movement of robot is done with L293d motor driver and the processor or embedded system is done through Raspberry pi3. .

I. INTRODUCTION

Agriculture is the primary source of revenue for India's population, which accounts for nearly 60% of the country's total. Farmers work in their fields to cultivate various crops based on the environment and resources available. Farmers must use large quantities of pesticides to increase food production in order to meet such high food demand for such a large population. Traditional manual pesticide spraying operations is full of direct exposure to the pesticide liquid work environment, great harm to human body and when this pesticide may come into contact with the farmer during spraying, which may trigger skin cancer and asthma illnesses. Increased pesticide spraying can impact consumer health as it enters the food chain. Pesticide spraying and fertilizer scattering are tedious applications. Despite the fact that pesticide spraying is now required, farmers still find it to be a hazardous process. This project is based on the development of an agricultural robot vehicle that navigates between crops using an Android application based on the farmer's instructions. This truck has lower-cost components, making it more cost-effective. To move the robot in the field, the farmer can use any Android smart phone with this application. Through an IoT application, farmers can control pesticide sprinkling devices. This low-cost robotic vehicle would increase efficiency, safety, and meet labour demand in agricultural applications.

II. LITERATURE SURVEY

1. The reference paper [1] addresses the advanced weed control system which improves agriculture processes like weed control, based on robotic platform. They have developed a robotic vehicle having four wheels and steered by dc motor. The machine controls the weed in the firm by considering particular rows per column at fixed distance depending on crop. The obstacle detection problem has also been considered, sensed by sensors .the whole algorithm, calculation, processing, monitoring was designed with motors &sensors.

2. The reference paper [2] addresses the current scenario of the world, as most of the countries do not have sufficient skilled manpower specifically in agricultural sector it affects the growth of developing countries. So they have made an effort to automate the agricultural sector to overcome this problem. An innovative idea of their project was to automate the process of sowing crops such as sunflower, baby corn, groundnut and vegetables like beans, lady's finger, pumpkin and pulses like black gram, green gram etc. to reduce the human effort and increase the yield. The plantations of seeds are automatically done by using DC motor. The distance between the two seeds are controlled and varied by using Microcontroller. It is also possible to cultivate different kinds of seeds with different distance. When the Robot reaches the end of the field the direction can be changed with the help of remote switches. The whole process is controlled by Microcontroller

3. The reference paper [3] addresses the advanced system which improves agriculture processes like cultivation on ploughed land, based on robotic platform. They developed a robotic vehicle having four wheels and steered by DC motor. The advanced autonomous system architecture gives the opportunity to develop a complete

new range of agricultural equipment based on small smart machines. The machine will cultivate the farm by considering particular rows and specific column at fixed distance depending on crop. The obstacle detection problem will also be considered, sensed by infrared sensor. The whole algorithm, calculation, processing, monitoring are designed with motors & sensor interfaced with microcontroller. The result obtained through example activation unit is also presented.

III. CONCLUSION

In this project, our aim is to implement a pesticide spraying robot. A robot for use in agriculture An Agrobot is a concept for improving the product's performance and cost, which, once optimized, would show to be useful in agricultural spraying operations. Farmers' workloads are reduced, as are health issues. Construct a robot that can travel on rough surfaces as well as carry a sufficient load of compressor and other equipment. Build a robot model with a strong enough structure to resist the field's challenges. Sure, once this idea is presented in a way that is appropriate for the Indian market, it will undoubtedly aid in lowering the 15% molality rate found in Indian formers associated with agricultural spraying operations. Projects like this inspire people to pursue agriculture as a full-time or part-time occupation. This is critical in developed countries, particularly India, where agriculture is the economic backbone.

IV. REFERENCES

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