

Title: Gardening Robot

Field of Invention

The present invention relates to Computer Science concepts applied to reduce Mechanical work

Background of the Invention

Gardening technology is one of the majorly depended area in the current era. Gardening hobby Psychologically it helps human to be stable and relaxed. It has been focused in government offices, corporate offices, schools, colleges, houses etc. It gives looks to the property and also enriches the oxygen level in the environment. Due to the impact of “Green Revolution”, people got awareness about the various techniques involved in gardening and the advantages in it. Nowadays, modern approaches were used in Gardening technology that includes the usage of tractors for ploughing the field, production of pesticides, invention of tube-wells etc. Water is the main necessity for gardening hence, various techniques were developed that engaged in watering the field easily, consuming less water and with reduced human efforts.

The following prior art is being reported:

("US5974348A") : An exact robotized work framework and technique is given. At least one self-exploring robots can perform computerized work tasks with exactness given six levels of opportunity in an undulating, inclining or unpredictable territory, for example, a business truck garden. A self-pushed robot travels through the nursery and performs cultivating undertakings following a predefined course by dead-retribution and occasionally deciding its position and direction by a route fix. At any rate seven route guides are situated around an edge of a nursery work territory. Each signal discharges electromagnetic radiation across the nursery for recognition by oneself pushed robot. An all encompassing picture gatherer accumulates and centers electromagnetic radiation from every route signal on an electronic camera to shape at any rate seven shaft spots. The overall situation of the identified shaft spots in the central plane change contingent on the six levels of opportunity for robot development in a nursery: the robot's three-dimensional position (x,y,z) and the robot's direction (heading, pitch, and roll). A route module decides the position and direction of the robot inside the nursery dependent on the yield of the imaging camera. A self-impelled cultivating robot performs many differed computerized

cultivating assignments from culturing, to planting, to gathering by controlling the purpose of effect of an execute conveyed by a robot with exactness, that is, to inside an inch on normal for some random position organize. Business practicality of little truck gardens is improved as mechanization is complete and open to the singular rancher.

("US8942862B2"): The current innovation identifies with a technique (400) and a framework (100) for directing an automated digging tool to a foreordained position. The mechanical digging tool incorporates a control unit (104) and a sensor unit (102) to identify managing signals. The sensor unit (102) distinguishes a first managing signal (110) from a first sign source (106) and the automated digging tool follows the principal directing sign (110) at a variable separation from the main sign source (106) towards the foreordained position. While inside a foreordained distance (D) from the foreordained position, the sensor unit (102) identifies a second managing signal (112) from a subsequent sign source (108). Inside the foreordained distance (D), the mechanical digging tool follows one of the first and the second directing signs (110 or 112) towards the foreordained situation at a pre-designed separation from the comparing signal source.

("US8306659B2 ") : A strategy for correspondence between a charging station and a robot, through a couple of electrical cables coupled between a force supply in the charging station and a battery in the robot. In activity, the force supply is successively exchanged between a first voltage level and a subsequent voltage level as per a foreordained sign example. The voltage level on the electrical cables in the robot is checked and connected with a particular order to be executed by the robot.

OBJECTS OF THE INVENTION

Some of the objects of the present disclosure, which at least one embodiment herein satisfies, are as follows.

It is an object of the present disclosure to ameliorate one or more problems of the prior art or to at least provide a useful alternative.

- A lightweight portable robot for sow and seed the plants at affordable price with automatic watering.
- Saves the garden when there exists non-availability of labors
- Automatic watering technique using multimodal approach helps in the field of gardening by avoiding the time constraint, unnecessary loss of water and drying of plants.

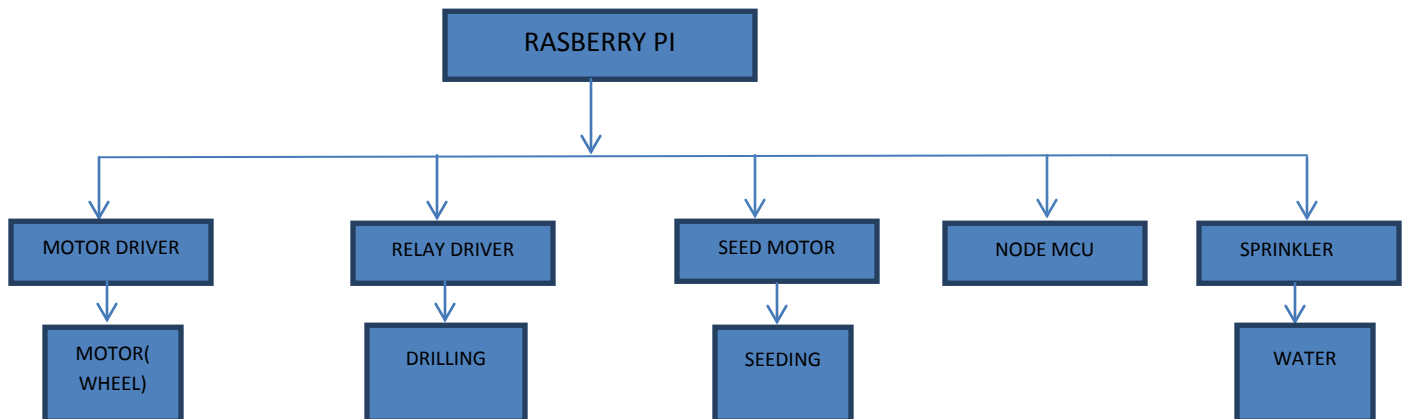
DETAILED DESCRIPTION OF THE INVENTION

The following description is of exemplary embodiments only and is not intended to limit the scope, applicability or configuration of the invention in any way. Rather, the following description provides a convenient illustration for implementing exemplary embodiments of the invention. Various changes to the described embodiments may be made in the function and arrangement of the elements described without departing from the scope of the invention.

APPLICATIONS:

- PLOUGHING
- SEED SOWING
- WATERING
- TRIMMING OVER GROWN GRASS

Circuit Diagram



Ploughing and Sowing:For smaller area of the garden,people themselves can plough the land and sow the seeds for growing grass or other show plants. For the garden having larger areas such as inacers(Lalbaugh and Cubbon park in Bengaluru), it is very difficult to plough or sow the seeds. To overcome this constraint, a robot controlled mobile application is used to plough the land and automatically sow the seeds. In continuation with the above procedure, it automatically waters the ploughed area which helps the gardener to save his precious time.

Trimming: This task is important and necessary for the garden to look beautiful. The task deals with trimming the over grown grass to keep the garden clean, tidy and wonderful. If the land is small a gardener can trim grass manually within the stipulated time. However, if the garden area is huge trimming the over grown grass in adequate time becomes a tedious job for a gardener. Thus, robot along with ploughing and sowing, it also trims the grown grass and helps in keeping the garden clean, tidy and beautiful.

Watering: The current methodology is done by using the dry land detector sensor. When the sensor detects the dryness in the soil, immediately it sends the signal to the water motor to initiate pumping the water. In order to avoid over pumping of water which leads to waste of power, the proposed approach helps in identifying the dry region and pours water only in that area in a limited way based on the level of dryness. The robot identifies the plant object using sensor and waters only those plant regions. This saves the power as well as wastage of excess water.

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Claims

We claim,

1. A lightweight portable robot for sow and seed the plants at affordable price with automatic watering.
2. Gardening robot according to the claim 1 , saves the garden when there exists non-availability of labors
3. Gardening robot according to the claim 1, automatic watering technique using multimodal approach helps in the field of gardening by avoiding the time constraint, unnecessary loss of water and drying of plants.

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ABSTRACT

The invention discloses a lightweight portable robot wedesigneda mechanical machine that can sow and seed the plants at the same time. The product is available to the gardeners at affordable prices. This saves the garden when there exists non-availability of labors. Also, automatic watering technique using multimodal approach helps in the field of gardening by avoiding the time constraint, unnecessary loss of water and drying of plants. This robot will also help in getting rid of over grown grass in the garden