**MURUGAPPA POLYTECHNIC COLLEGE**

**SATHYAMURTHY NAGAR, CHENNAI-62**

**DEPARTMENT OF ELECTRONICS (ROBOTICS) PROJECT JULY 2022- NOVEMBER 2022**

**PROJECT TITLE: GEOFENCING AND SOIL MOISTURE MEASURING (GSMM)**

**DEVICE FOR AGRICULTURE**

**LIST OF STUDENTS:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No** | **ROLL NO.** | **REGISTER NO.** | **NAME OF THE STUDENT** | **PROJECT GUIDE** |
| 1. | 219272 | 1912447 | A.Harish | Mr.P.Kalaiselvan  Lecturer / E(R) |
| 2. | 219276 | 1912451 | T.Kumar |
| 3. | 219284 | 1912459 | K.Rubesh |
| 4. | 219298 | 1912473 | S.Vishnu |

**ABSTRACT:**

The main objective of this process is to maintain the crop in agricultural field without supervisor for long days. It is easy to supervise the large area of agricultural field.

In this process, a number of Moisture sensors are placed in the agricultural field and it measures the moisture of the soil. If the moisture of the soil decreases, then sensor automatically gives signal to “ON” the motor pump which supply water to the crops till the moisture of the soil is required by the crops.

Due to heavy rainfall the crop may be affected. If excess of water in agricultural field, it tends to open the Ridge of a field to drain the excess of water. This helps to protect the crops from heavy rainfall. This is done with the help of Servo Motor, Servo Motor act as a door and if it is excess of water in the land it tends to open the Ridge of the field.

Geofencing: Due to some animals the crops may affect. So, if the animals get into the agricultural field it Sense the animal and turn on the alarm, through this the people can understand that the animal is enter into the field and they take further actions.

Here we are using IR Sensor to detect the entry of animals into the agricultural land. If animals entered, it give signal to ON the alarm, this indicates the entry of animals.

**SOFTWAREREQUIRED:**

* Arduino IDE

**HARDWARE REQUIRED:**

* Arduino
* Soil Moisture Sensor
* Motor With Pump
* Servo Motor
* IR Sensor
* Battery
* Alarm

**BLOCK DIAGRAM:**

**B**

**attery**

**Arduino**

**IR Sensor**

**Moisture Sensor**

**Motor with pump**

**Servo Motor**



**Alarm**



**ADVANTAGES:**

* In this system the Agricultural Field can be maintained without supervisor for long days.
* It Reduces the damage of crops due to Animals.

**Approximate Cost of the project: Rs. 6000/.**

**Certified that the above project has not been done by any branch of the same year/previous year.**

**Signature of the Project Guide Signature of the HOD/ER**

Approved by

**Signature of the Principal**