Document for

Seeds App Professional Reports

at the University of Illinois Chicago

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I Project Description

Seeds is an agriculture app that can assist you with your gardening experience, by providing various tools to help you analyze the soil and give you the best botanic advice. This is done through the use of multiple sensors to measure factors such as temperature, humidity, and nitrogen in the soil.

That can help farmers or botanic lovers a lot. When they are going to plant a new plant, they can check garden environment status on seeds app and see it whether it is compatible with the new plant, seeds app also can provide the methods to renovate the garden to match the new plant, it requires wifi/LTE to access botany database in server. In addition, maybe farmers have a lot of gardens and take care of variety of plants, it is difficult to manage and monitor all of them. So with seeds app, they can buy many devices and easily to track their gardens status and know what step to do for plants development.

1. Project Overview

Seeds provides the small hardware device that contain many sensors such as temperature sensor, humidity sensor, nitrogen, soil moisture sensor, (perhaps photodiod light sensor, wind speed sensor if necessary) to measure garden environment. That device also contains a central processor to collect all sensor data and communicate with seed app via wireless(both ble and wifi are possible) for user to get garden environment parameters. The seeds app will do some calculations based on the sensor information, then send it to botany database to decide which plants are able to grow on that soil. Some useful features include following the lifespan of growing plants, sending notifications and reminders to aid in the gardening process, also you can setup a sprinkler system and connect to device to set timer for watering the plants.

2. The Purpose of the Project

Today, many people have a hobby of garden, many farmers want a quick method to get soil information and check which plants match with their soil. This project is for that. We have a smart solution to test soil and find out matched crops, even tracking for the garden. This project is for both professional farmers and amateur as well.

2a. The User Business or Background of the Project Effort