PH 3042 - ROBOTICS & AUTOMATION

Project Proposal

Crop monitoring system

s14371

Background

Due to the busy schedule of the people, most people forget to maintain the relevant conditions for the plants they have grown. Some plants do die or malnourish due to not having enough water, moisture, temperature etc. Also, it is hard to examine some physical parameters like soil moisture, the temperature needed for a plant physically to an accurate level. Mostly for indoor ornamental plants the needed conditions should be supplied preciously for their sound growth. A monitoring system that covers all the above parameters would be a great initiative to plant lovers. Therefore, a crop monitoring system that gives you access to any corner of the world with a fingertip at your mobile phone or laptop might be a great initiative.

Objectives

- ✓ To accurately measure temperature, humidity, soil moisture data for a given plant of a crop.
- ✓ Report the real-time state of the parameters to the user using a mobile application and a web app for the user.
- ✓ Giving an understanding about the user about the requirements of the plant
- ✓ Predicting the essentialities of the same kind of crops concerning the currently given parameters.

Proposed system

This system is composed of a DHT 22- humidity and temperature sensor and soil moisture sensor. This would measure and report the sensor data using the NodeMCU and display the measured parameters at regular intervals on a real-time basis. Then this data is used to predict future trends in the air moisture, soil moisture and temperature conditions and could be used to create a model to find the best conditions for a certain type of crop.
A mobile application and a web app with a dashboard to see relevant parameters and to show the processed data are planned for the project